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REVIEW OF GEF ENGAGEMENT WITH THE PRIVATE SECTOR FINAL REPORT

(Prepared by the Monitoring and Evaluation Unit)

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LIST OF ACRONYMS

APPTA	Talamanca Producer's Association
CABEI	Central American Bank for Economic Integration
CECP	China Energy Conservation Project
CEEF	Commercializing Energy Efficiency Finance
CFLs	compact fluorescent lights
CIS	Commonwealth of Independent States
DSM	demand side management
EBFP	Environmental Business Finance Program
EBRD	European Bank for Reconstruction and Development
ELI	Efficient Lighting Initiative
EMCs	energy management companies
EPCs	energy performance contracts
ESCO	energy service company
ESP	environmental service payment
FCG	Fideicomiso para la Conservación en Guatemala (Guatemalan Environmental Conservation Trust)
FESP	Forestry Environmental Services Payment Program
FIs	financial intermediaries
FONAFIFO	National Forestry Financing Fund
FUNDECOR	Foundation for the Development of the Central Volcanic Mountain Range
GEF	Global Environment Facility
GHG	greenhouse gases
GoI	Government of India
HEECP	Hungary Energy Efficiency Cofinancing Program
IA	implementing agency
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian NGO)
IFC	International Finance Corporation
MBC	Mesoamerican Biological Corridor
M&E	monitoring and evaluation
MNES	Ministry of Non-Conventional Energy Sources of India
NGO	nongovernmental organization
OP	operational program
OPS2	Second Overall Performance Study
PES	payment for environmental services
PIR/PPR	Project Implementation Review/Project Performance Report
PPAs	private protected areas
PV	photovoltaic
PVMTI	Photovoltaic Market Transformation Initiative
REEF	Renewable Energy and Energy Efficiency Fund
RPPN	Private Natural Heritage Reserves
SACCOs	savings and credit cooperatives
SalvaNATURA	Ecological Foundation of El Salvador
SDC	Solar Development Corporation
SDF	Solar Development Foundation
SELCO	Solar Electric Light Company
SHS	solar home systems
SMEs	small and medium enterprises
SDG	Solar Development Group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

I. INTRODUCTION

1. The GEF Instrument directs that the Global Environment Facility (GEF) will engage the private sector along with other key partners.¹ Initial efforts to involve the private sector in GEF operations were undertaken early during the pilot phase. The GEF Council approved a strategy in 1996 that identified the “removal of market, information and other barriers” as the key approach to engaging the private sector. The strategy paper suggested that influencing overall market conditions in which businesses operate might offer the greatest leverage in many cases (indirect engagement), but that concrete investment projects might be required to “lead the way” (direct engagement).² A 1999 policy paper on the private sector identified several courses of action needed for barrier removal, including technical assistance and a range of nongrant financing modalities such as contingent grants, loans, and partial credit guarantees.³

2. GEF work with the private sector has been reviewed as part of previous studies of the GEF’s overall performance. The *Second Overall Performance Study* (OPS2) of the GEF urged the facility to “engage the private sector more extensively.” The study suggested “clear guidelines from the GEF Secretariat on new modalities” as well as a substantial increase in “global environment–related private sector expertise” within the GEF Secretariat.⁴

3. At its May 2002 meeting, the GEF Council requested the Secretariat, in consultation with the Implementing Agencies, to prepare a Private Sector Strategy for review and approval by the Council. As a prelude to the preparation of the strategy, the Monitoring and Evaluation Unit, in collaboration with the Secretariat and the Implementing Agencies, initiated this review in September 2002.

4. In accordance with the Terms of Reference, the objectives of the review were to identify the instruments or approaches employed in engaging the private sector, assess the results in terms of increased private sector engagement and changes in markets, draw lessons from the experiences with different approaches thus far, and recommend future directions. (For the Terms of Reference of the review, see Annex 1).

5. For the purpose of listing GEF projects with a substantial private sector engagement component, “private sector enterprises” were broadly defined as having commercial viability as their goal. However, the review covered a wider spectrum of GEF efforts to engage the private sector. For example, the review covered projects encouraging governmental, public sector cooperation in creating more effective market conditions for private sector attainment of global environmental benefits. Another example is GEF projects in countries with transitional economies, where some commercial enterprises are partly or fully owned by the public sector. Also included in the review are projects in Central and

¹ GEF, 1995, *Instrument for Establishment of the Restructured GEF*, Washington, D.C., paragraph 28

² GEF, 1996, *GEF Strategy for Engaging the Private Sector*, GEF/C.7/12, March 7, p. 4.

³ GEF, 1999, *Engaging the Private Sector in GEF Activities*, GEF/C.13/Inf.5, April 22, pp. 6–7.

⁴ GEF, 2000, *Second Overall Performance Study*, p. 108.

South America that assist private landowners in establishing reserves for conservation and sustainable use of forests.

6. The review only covers projects that focus on climate change and biodiversity. GEF's focus has also included international waters and private sector involvement in the ozone area. However, those two focal areas were not included in the review due to limited evaluation resources and a recent reduction of GEF efforts in the ozone area.

7. In the field visit phase of the review, 24 GEF projects or subprojects of the Small And Medium Enterprises (SME) Program were selected for field visits by the review team. The selection of projects was based on representation of the different approaches to private sector engagement in the two focal areas. However, the sample did not include every approach that has been used in biodiversity.

8. From November 2002 to February 2002, field review teams representing the GEF Secretariat, the implementing agencies (IAs), and, for climate projects, a GEF consultant, were sent on six separate trips to visit ongoing or completed projects in Africa, Latin America, China, Europe, Central America, and the Indian subcontinent (India and Bangladesh). The teams met with private sector proponents, government officials, NGOs, community groups, banks, and other project stakeholders and financial sector players. Upon the completion of the field visits, the review team and the IAs participated in a workshop to discuss the findings from the individual country visits, perform the desk review, and identify crosscutting issues. The workshop participants agreed that these tasks required more analysis and refinement before the final report was prepared.

9. In the first stage of drafting the report, the review team relied largely on field visits to analyze and draw conclusions about GEF experiences in private sector engagement in climate and biodiversity. After discussions with implementing agencies, however, it was agreed that the draft was focused too much on the details of individual projects, rather than on the broader lessons learned from experience thus far. In a second drafting stage, from November 2003 to March 2004, the review focused more on assessing lessons learned with regard to the major approaches employed for private sector engagement in the two focal areas rather than assessment of individual projects. Project results were viewed only as examples of larger issues in regard to the approach taken. An additional approach to private sector engagement in biodiversity conservation—private lands conservation—was added to the scope of the review, and five additional projects in biodiversity were reviewed in depth, four of which were related to private lands conservation.

10. In the second phase of the review, additional sources of information beyond the field visits were used to complete the biodiversity section, including review of technical papers and interviews with task managers, project staff, and others with relevant expertise in the larger issues.

11. The data on the visited projects mostly refer to the situation at the time of the visit.

12. The initial team consisted of:

- Ramesh Ramankutty, GEF Monitoring and Evaluation team, task manager;
- Saima Qadir, private sector specialist, GEF Secretariat;
- Frank Rittner, climate change specialist, GEF Secretariat;
- Bernard Jamet, technical expert (international consultant);
- Daniel Young, researcher (consultant);
- Dana Younger, World Bank and Sam Wedderburn, IFC;
- Andrew Bovarnick and Geordie Colville, UNDP; and
- Tom Hamlin and Mark Radka, UNEP.

13. Except for Bernard Jamet, none of the initial review team is responsible for the contents of the final report. This report was prepared by Bernard Jamet, who wrote the climate change section; Gareth Porter, who wrote the biodiversity section; and Jarle Harstad, who led the second phase of the review.

II. PORTFOLIO REVIEW

14. In a desk review of the GEF portfolio of climate and biodiversity projects, the review team identified projects that included a significant private sector component. A total of 76 ongoing or completed projects or International Finance Corporation (IFC) subprojects were identified as having such a component. In the second phase of the review, a number of changes were made to the initial list: a few additional biodiversity projects were added, to take account of the importance of Private Land Conservation; and a few biodiversity projects were dropped, because they did not appear, on closer examination, to meet the qualifications for meaningful private sector engagement. Furthermore, projects which had been counted multiple times in the first phase of the review because of different countries visited (such as the Efficient Lighting Initiative) or because they had multiple subprojects (such as the Small and Medium Enterprises Program), were counted only once in the second phase. Of the total of 621 regular- and medium-size GEF projects under implementation as of June 30, 2002, only 60 were found to meet the criteria for private sector engagement. These 60 were divided into projects subject only to a desk review and projects that were visited by the review team, as shown in Table 2 in the Annex. Projects that were visited during the review are marked with an asterisk (*).

15. The 60 projects meeting the criteria for private sector engagement are distributed as follows: climate change (41); biodiversity conservation (18); and multiple focal areas (1). The predominance of climate change is clearly due to the fact that most biodiversity projects are focused on public sector institutions and communities rather than the private sector.

16. Within the climate focal area, projects and subprojects on energy efficiency (OP5) and on renewable energy (OP6) are almost equally balanced, with 21 and 22 projects each (OP is Operational Program). Solar photovoltaic projects dominate renewable energy. Virtually all of these projects cooperate with local SMEs.

17. Of the 18 projects involving private sector engagement in biodiversity, 12 use approaches analyzed in this review. One project employs ecotourism, 4 involve certification or other market-related

activities for coffee and cacao production, 4 are devoted to private lands conservation, and 1 applies the approach of direct payments for biodiversity conservation as an “environmental service.” The IFC small and medium enterprises project funds subprojects related to ecotourism, markets for coffee, and direct payments for biodiversity conservation. The remaining 6 projects represent a variety of different approaches which were not within the scope of this review, including private sector involvement in wildlife conservation, private sector management of protected areas, private sector involvement in marine conservation, and funds supporting a range of biodiversity investments. These latter approaches would be appropriate subjects for future evaluation.

III. POLICY FRAMEWORK FOR PRIVATE SECTOR ENGAGEMENT

18. The framework and policies for GEF’s private sector engagement were laid down in two GEF Council Papers dating from 1996 and 1999.⁵

19. The purpose of GEF’s engagement of the private sector is to attain enhanced levels of global environmental benefit, in light of the following points noted in the 1996 and 1999 Council documents:

- Private investment flows are far more important than official development assistance to the same countries.
- Privatization of state-owned electric utilities, which accelerated in the 1990s, suggests the need to work more with the private sector in the energy sector.
- Private sector actors can transfer state-of-the-art technology for energy efficiency and other environmentally desirable objectives.
- Project sustainability and replication are often dependent on conditions that are conducive for further private sector investments.
- GEF support in this area offers prospects for further mainstreaming of similar efforts by the implementing agencies.

20. In addition to energy, a potential for private sector engagement was also envisaged in biodiversity, including medicinal drugs and genetic resources in agriculture.

21. Rather than supporting the private sector itself, GEF policy has sought to remove barriers to the promotion of market transactions either indirectly, by affecting the conditions under which the private sector operates, or directly, by helping the entry of firms into a market that is still untested.

⁵ GEF, 1996, *GEF Strategy for Engaging the Private Sector*, GEF/C.7/12, March 7; GEF, 1999, *Engaging the Private Sector in GEF Activities*, GEF/C.13/Inf.5, April 22.

Modalities of Support

22. In the 1999 Council Paper, four special modalities, listed below, were identified for GEF engagement. Note that the cooperating partners at the country level have more often been the public sector than the private sector.

- (1) *Grants* were aimed at indirect stimulation of private sector reforms through barrier removal activities. These included support for policy reforms, standard setting, and other types of capacity building. The cooperating partners at the country levels have more often been the public sector than the private sector.
- (2) *Nongrant modalities* were thought most appropriate for projects that were considered potentially economic, but where there might be lack of local expertise, environmental uncertainties, or other impediments. These modalities have included contingent grants, loans, partial credit guarantees, investment funds, and reserve funds. They were expected to increase the cost effectiveness of GEF resources by reducing initial outlays, inducing greater financial discipline, and creating a potential for repayment on the investment. Contingent financing returns were to be carefully focused on the task specific to the GEF to avoid underwriting risks unrelated to the GEF purpose. The 1999 Council paper stipulated that the project sponsors cover conventional commercial and other baseline costs. The paper also called for carefully structured risk-sharing arrangements.
- (3) *Alternative bankable feasibility studies* were devised for situations where potential investors lacked information about alternatives to conventional practice that could provide global environmental benefits at comparable or even lower costs. The bankable study would be financed by GEF, and made available to private sector financiers or other private sector partners for project funding. For GEF the end result would be comparable to a demonstration project. A conservative approach would be to divide the study costs between GEF and the private sector partner, with repayment to GEF if the project went ahead.
- (4) *Progressive partnerships* meant direct collaboration between GEF and a company or business association, with sharing of risks and project costs. The purpose would be to create a commercial scale demonstration of innovative approaches.

23. Until now GEF has essentially employed modalities (1) and (2)? grant and nongrant financial modalities. Modality (3)? bankable studies? was only partially employed in one project. Modality (4)? progressive partnerships? was discussed with one company, but was not realized.

Project Approval Process

24. Both Council papers emphasized that simplified and shorter decisionmaking processes were required to work effectively with the private sector, because of its needs to make quick decisions with

regard to the market. Complex and detailed requirements would stifle initiatives. For this reason GEF proposed the use of clear, simple and rigorous rules and practical guidance.

Private Sector Awareness of the GEF

25. The 1999 Council Paper recognized that the business community is generally unaware of the GEF. To remedy the situation, the paper stated that projects that engage the private sector would be identified primarily through the Country Dialogue Workshops (CDW), which are implemented by UNDP.⁶

Sharing of Risks: Incentive Structure

26. The 1996 Council paper recognized the need for sharing of risks between the private sector, project proponents, and the GEF. The paper noted that a company's interest in access to GEF funds would depend on the extent to which the GEF project could mitigate the "extra costs and risks inherent in a global environment-focused project..." The paper envisaged the development of "best practice guidelines for defining incremental costs in private sector projects." The 1996 paper noted that one incentive for a company to undertake a global environment-focused project would be the provision of contingent financing; such funding would cover potential losses, but would not be required if a project were successful.

Replication

27. It is central to the GEF mandate that innovative and promising technologies or approaches should be replicated in other markets. While replicability would be ensured to some extent through successful business ventures, GEF also considered complimentary replicability mechanisms, such as the initiation of separate projects that could undertake dissemination efforts and effectively communicate newly proven and successful business opportunities.

III. CLIMATE CHANGE

28. The overall objective of GEF-financed activities is to support sustainable measures that reduce the risks and adverse effects of climate change. The activities relevant to private sector engagement include long-term mitigation projects and enabling activities to facilitate implementation of responsive measures. The long-term measures are supported in the context of Operational Programs, including OP5 (removal of barriers to energy conservation and energy efficiency); OP6 (promotion of adoption of renewable energy by removing barriers and reducing implementation costs; OP7 (reduction of the long-

⁶ While the CDW have attracted 6 percent of participants from the private sector on average during a 3 year period, Project Implementation Reviews (PIRs) and the independent evaluation of the program recommended that this percentage should increase. Other findings indicated that (a) GEF operational focal points often had difficulty in identifying appropriate representatives to participants from the private sector, and (b) in many cases the private sector was not sufficiently motivated to increase knowledge of GEF.

term costs of low greenhouse gas–emitting energy technologies); and OP11 (promoting environmentally sustainable transport).

29. Projects assessed under this review fall largely under OP 5 and 6; the number of projects with private sector engagement under OP 7 and 11 is too limited to form the basis of an evaluation.

30. Projects analyzed through desk review and field visits use modalities that engage the private sector both directly and indirectly. These direct and indirect modalities coincide with the “supply push” and “demand pull” approaches to increasing the adoption of energy-efficient or renewable energy products, services, and practices.

31. Supply-push strategies include providing technical assistance and know-how transfer to manufacturers to upgrade their product designs; supporting minimum efficiency standards and regulatory mechanisms; facilitating voluntary agreements with manufacturers and distributors; piloting new distribution mechanisms through retailers or electric utilities; providing financial incentives to producers; providing quality testing; and providing financing for manufacturing upgrades. Demand-pull strategies include educating consumers and professionals about the characteristics, costs, and benefits of the energy-efficient or renewable energy technology; running media campaigns to increase consumer awareness; reducing retail prices of technology through rebates, subsidies, and bulk purchases; providing consumer financing; offering buy-back/recycling programs, and establishing certification, standardization, and labeling programs.

Energy Efficiency

Overview of Approaches and Results

32. GEF action towards energy conservation and efficiency is based on its OP5, *Removal of Barriers to Energy Efficiency and Energy Conservation*, which supports removal of barriers to large-scale application, implementation, and dissemination of energy-efficient technologies, and promotion of more efficient energy use. From the perspective of engaging the private sector, these barriers are often perceived as “risks” that stand in the way of market development and commercialization of energy conservation related products.

33. Energy efficiency projects generally involve the end uses of energy, although some opportunities exist to reduce energy consumption at the transformation level (such as co-generation). Because the actions are often oriented towards the energy consumers (demand pull actions), the public sector plays a key role by setting up adequate policies for energy efficiency, the creating appropriate regulatory frameworks, and the implementing capacity building measures. Public-sector programs for energy efficiency can have a major impact by fostering market transformation and removal of barriers that would allow for accelerated private sector engagement.

GEF Experiences with Different Approaches

34. This subsection reviews the use of three different GEF approaches for removing barriers and promoting or reducing risks to private sector investment in energy efficiency: market development for

energy efficiency investments, support of financial intermediaries, and promotion of new market mechanisms such as energy service companies (ESCOs).

Market Development for Energy-Efficient Products

35. The creation of a new market for energy-efficient products or services often requires raising awareness among energy consumers and building confidence regarding the quality of these products or services.

36. Promotion of certification, standard setting, and labeling has been one modality through which the GEF has engaged private sector stakeholders. The GEF has allocated grants, mainly to project components dealing with standard setting, certification, awareness raising, and so forth, through both public sector agencies and private sector actors. Several projects have successfully helped initiate market development for energy efficiency products. Three of these projects are included in the present review.

37. Two projects in China under implementation through UNDP—China Efficient Refrigerators, and China Efficient Lighting—have successfully demonstrated standard setting, certification, and labeling activities to promote consumer awareness and build markets for energy-efficient products. These activities are beginning to create a market for efficient refrigerators and efficient lights in China. From 1999 through 2001, participating refrigerator (and compressors) manufacturers, most of which are now private companies, have achieved considerable energy efficiency gains.

38. Experiences from GEF market transformation projects are catalyzing similar activities locally and in other countries. The three completed projects in Mexico, Poland and Thailand in the portfolio are all being replicated in some form.⁷ The clearest example of replication is in Mexico, where the original GEF-supported utility demand side management (DSM) program has led to further energy efficiency programs for lighting, with almost five million additional compact fluorescent lights (CFLs) sold, as well as programs for building insulation and air conditioning.

39. GEF support for certification, standard setting, and labeling related to energy-efficient products has sometimes lacked the participation of key private sector actors, in particular the manufacturers. The absence of government financial commitments can be a critical weakness in the use of these approaches.

40. Such weaknesses are particularly obvious with the Efficient Lighting Initiative (ELI) project implemented through the IFC in several countries. This review assessed implementation of ELI in Hungary and the Czech Republic. According to the IFC, the project purposely maintained detachment from the manufacturers in order to maximize the credibility of the lighting products logo (the Green Leaf). In keeping with this approach, the project did not seek to involve the manufacturers beyond the usual design and implementation of marketing activities and communication campaigns. These manufacturers (the three largest international bulbs producers in the world), who have profited from the

⁷ GEF, 2002, "The GEF Energy-Efficient Portfolio," GEF M&E Working Paper No. 9.

awareness campaign paid for by the GEF, have only made modest financial contribution to the schemes other than paying for the use of the logo. Distributors, large retail distributor chains, small retailers, and lighting installers are also important market actors whose involvement and support are needed to make the new logo sustainable. Without their commitment on continued marketing activities, there is a risk that the existing label will disappear once GEF support is terminated.

41. Regarding the real impact of the project, the international manufacturers involved were, in general, not willing to provide data regarding the campaign results in terms of sales increase, for confidentiality reasons. As foreseen in the monitoring and evaluation (M&E) plan submitted to the GEF at the time the ELI program began, this lack of cooperation led to evaluation surveys that relied on a wide variety of data inputs. Arrangements might have been made, however, to obtain more reliable and cheaper data directly from the manufacturers.

42. ELI is thus an interesting attempt to start a market transformation process outside of any public sector policy framework such as a national certification and labeling scheme. The prospects for its sustainability appear doubtful unless the international manufacturers involved, as well as others are active in these markets, are fully committed to make both cash and in-kind contributions to sustain the new logo.

43. In the case of China Efficient Refrigerators, GEF grants were used for transfer of technical assistance and know-how to domestic manufacturers. Providing a grant was less complicated than disbursing a loan or guarantee for these domestic manufacturers in China. A relatively small grant (5–10 percent of total funds needed at the enterprise level) was used mostly for technical assistance, study tours, dissemination of information, and for testing equipment for a few manufacturers. This funding helped achieve the participation of most of the important manufacturers, in particular through the purchase, at their own expense, of up-to-date and modern Western technologies. These technologies in turn enabled the manufacturers to meet the new energy efficiency standards set for their products and contributed to the success of the project. Such an approach is appropriate in situations where a market for energy efficiency is nonexistent and initial demonstration projects are imperative to kickstart the market.

44. The situation in China is particularly favorable for such efforts, because a number of activities supported by various organizations have already been working on certification, labeling, and standardization of energy-efficient products. However, before the GEF project, the government had not started working on certification, labeling, and standardization related to efficient refrigerators in a comprehensive manner. Therefore, the GEF the project appears to have catalyzed market transformation and the enlistment of the full support of both the government and manufacturers.

Promotion of New Market Mechanisms (ESCOs)

45. Energy service companies (ESCOs) and similar third-party financing companies have long been recognized in Europe and the United States as efficient private sector mechanisms for overcoming barriers to energy efficiency investments, through their funding of development and role in implementing energy performance contracts (EPCs). An ESCO invests in energy efficiency projects based on an EPC

signed by the client and the ESCO. The client is obligated to pay the ESCO a portion of the energy savings actually realized after the project has been implemented over the contract duration. At the end of the contract, ownership of the installed equipment and all future energy savings revert to the client. These contracts generate profits for ESCOs, but the ESCO bears the risk that anticipated savings will not be achieved.

46. In developing and transition countries, investments in ESCOs have been hampered by a lack of familiarity with this concept and the lack of understanding on the part of financial institutions. In many countries this has resulted in a slower than expected private sector engagement in the setting up of ESCOs because local companies lack the necessary capital basis and cannot obtain any local bank support. Another problem is the confusion that is made at times between “real” ESCOs that are ready to bear a financial risk and other companies who are using this terminology but are merely selling their products without any financial risk.

47. One approach to overcoming these barriers was demonstrated in the China Energy Conservation Project (CECP), implemented through the World Bank. The barrier to access to financing for local ESCOs—called energy management companies (EMCs) in this project—was overcome by the provision of a credit line by the World Bank to the EMCs covering up to 75 percent of each subproject’s investment cost. With GEF and World Bank financial commitments in place, one of the pilot EMCs successfully pioneered a strategic partnership and line of credit arrangement with a Chinese commercial bank by demonstrating a successful track record of subprojects, strong management, and a viable business plan. The World Bank line of credit, in combination with GEF grants and technical assistance, has been instrumental in helping local financial institutions overcome their initial reluctance to invest in what had been perceived as risky energy efficiency activities.

48. As mentioned above, however, grants have been necessary to buy down risks and to create incentives for investment. Chinese authorities might not have accepted a sovereign World Bank loan without an accompanying GEF grant. The public shareholders for the three pilot EMCs provided equity capital only because the GEF grant was included in the financial package to fund the first demonstration projects in the product lines of the EMCs. One of these companies is now privatized, and it is likely that the two others will soon be privatized as well. Therefore this operation is undoubtedly a remarkable success in encouraging private sector engagement. The challenge remaining is to induce the Chinese financial sector to replace the World Bank and donors as the main source of credit and, possibly, equity to support the emergence of a number of new full-fledged ESCOs.

49. Other projects reviewed in the GEF portfolio aim at fostering the establishment and development of private ESCOs. One example is the UNDP-implemented project in Kenya that targets local SMEs already involved in the energy efficiency business. The objective is to encourage their evolution towards the creation of full-fledged ESCOs through adequate training and financial support from local banks. This project is utilizing grant financing, however, and does not involve a private sector contribution beyond the moral support of the Kenya Association of Manufacturers. New steps have recently been taken to enhance the awareness of the local banking sector, and thus make it better prepared to support energy efficiency activities in general and ESCOs in particular. But much greater support will be needed, through means that still have to be determined. A potentially useful approach in

this regard is exemplified by the Hungary Energy Efficiency Cofinancing Project (HEECP), which shows that the provision of technical assistance and partial guarantees (see below) can effectively support energy efficiency investments and ESCO business development. In Hungary, several ESCOs have indirectly benefited from this program, and one of the banks active under the scheme established an ESCO at the outset of the project. The parent bank is now said to be replicating the model in other markets.

Support to Financial Intermediaries

50. It is well known that financial institutions have difficulties in lending to energy efficiency projects in most developing countries and in countries with economies in transition. Two key barriers are (1) the perceptions of local financial institutions of high credit risk because of lack of experience with energy efficiency project finance; and (2) low capacity to prepare projects because of high preparation costs and the lack of knowledge of project developers. Therefore, local banks often provide poor service for this kind of project. The banks require high levels of collateral and sometimes a significant down payment from the project developers. They are also reluctant to provide long-term financing, often have a poor understanding of the technical part of the projects, and do not consider the energy costs savings as revenue for the investment. The lack of training of bank personnel has been an important obstacle to energy efficiency finance.

51. To overcome these barriers, the HEECP, implemented through the IFC in Hungary via the creation of a guarantee facility, offers an innovative financial model. The guarantee facility has two components: provision of partial guarantees on a subordinated recovery basis to local banks for specified projects that they would not otherwise risk financing; and technical assistance for building capacity in financial institutions and ESCOs. The guarantee facility's main objective is to expand availability of commercial financing for energy efficiency projects and to build a sustainable lending market for energy efficiency investments in Hungary. A technical assistance component was used to establish project development capacity within the banks and help them develop project financing methods based on cash flow analysis.

52. According to IFC, four private banks representing 95 percent of the commercial lending market of Hungary have signed guarantee facility agreements. However, the number of projects financed under the guarantee scheme so far seems relatively small considering that HEECP started its operations in 1996. In addition, 25 percent of the guarantee facility remains unallocated at the time of this review, and a relatively large percentage of the allocated portion remains unused by the banks involved.

53. The impact of the guarantee on the market will have to be measured not only by the number of transactions directly guaranteed, but also by whether financial institutions are able to use the guaranteed pilot loans to develop new business lines without need for further guarantees. Through guarantee and financial advisory work, the guarantee facility helps these banks as well as ESCOs to implement more projects. This in turn helps ESCOs to raise equity and to develop. The facility also supports very small project developers' access to financing, and helps ESCOs negotiate better conditions with banks.

54. Note that many other incentives from public local sources and international organizations, including the GEF/UNDP Public Sector Energy Efficiency Project, were introduced during the same period in Hungary. These incentives have all contributed, to some extent, to increased competition, bank interest in energy efficiency projects, and openness to innovative approaches. The Hungarian government and local authorities have developed a number of financing instruments to support energy efficiency, such as municipal guarantees, soft loans, and grant facilities for local banks. Other initiatives started in the early 1990s by the bilateral agencies (like the German Coal Aid) and multilateral banks have helped create a favorable environment for energy efficiency. The European Bank for Reconstruction and Development (EBRD), for instance, created ESCOs and began establishing dedicated credit lines beginning in 1995.

55. HEECP was one of the few projects that focused specifically on commercial financial intermediation. HEECP has helped banks in developing an internal knowledge of appraising energy efficiency projects. However, the short time available for field review of the project did not permit an authoritative assessment of its contribution to market transformation. A more in-depth analysis, including thorough examination of the portfolio of loan agreements financed under the guarantee scheme, would be needed for such an assessment.

Conclusions

56. The GEF seeks to mainstream energy efficiency market transformation into the regular operations of the implementing agencies, thereby leveraging additional funding and ensuring risk sharing. Initial concessional support is required to achieve the GEF goals of replication and catalytic market transformation. However, GEF strategy also aims to create conditions for both IAs and financial intermediaries (FIs) to fund energy efficiency projects on near-commercial or commercial terms.

57. GEF policy decisions for assistance in energy efficiency center on tradeoffs between engaging in close-to-commercial markets and markets that can provide significant global benefits. In the energy efficiency portfolio, some of the host countries, particularly in the transitional economies in Eastern Europe, already had relatively advanced energy efficiency sectors.

58. Concrete results have been achieved in standardization, certification, and labeling projects, with participation or the support of manufacturers and private stakeholders. Particularly in China, some of the local equipment producers have shown a willingness to cooperate in the development of efficiency standards. These manufacturers are developing production lines and final products, even without GEF financial support, that meet international quality criteria. The GEF role in promoting and facilitating the establishment of these standards has been extremely important to the success of these manufacturers.

59. The use of certification and labeling as a primary nonfinancial mechanism for supporting market transformation is successful when sustainability is ensured either by government or private sector commitments. In the absence of government commitment, the failure to obtain full ownership of a certification and labeling system by the relevant manufacturers and other private sector actors may put the system sustainability at risk.

60. Although the implementation of the guarantee fund project has been relatively slow in terms of making local financial institutions participate in the guarantee scheme, the results achieved so far demonstrate its potential for further development and replication in other countries, possibly more risky ones. The project promoting the development of ESCOs in China has been particularly impressive in terms of setting up specialized private entities and realizing a number of energy efficiency investments. It also offers a high replication potential, a significant impact on meeting energy efficiency targets, and an attractive leverage ratio through the raising of additional financing from private investors and local banks.

62. The HEECP has shown the importance of training in project financing methods to raise the awareness of the senior management of banks, thus mitigating the risk of lack of familiarity with energy efficiency investments.

63. Much more work is needed to establish a better link between the financial world and the projects sponsors or developers. Often energy efficiency proposals submitted to FIs are not bankable or would lead to very high transaction costs, so that even a guarantee instrument would not help. Project sponsors need more training in project preparation and additional financing of preparation costs. This was the primary objective, for example, of the UNEP Redirecting Commercial Investments to Cleaner Technologies project, which is an interesting example of another financial tool largely not utilized by GEF.

Renewable Energy

Overview of Approaches and Results

64. The GEF has supported renewable energy projects through OP6 and OP7. The goal of OP6 is to promote the adoption of renewable energy by removing barriers and reducing implementation costs. OP7 is aimed at reducing the long-term costs of energy technologies that emit low levels of greenhouse gases (GHG). The vast majority of private sector renewable energy projects in the GEF portfolio are based on solar photovoltaic (PV) technology. GEF has relatively little engagement with the private sector in mini-hydro technology, geothermal energy, use of biomass or household wastes, or methane recovery from landfills.

65. In the renewable energy sector private investors, financiers, manufacturers, and product distributors have a vested interest in supporting and participating in actions that could lead to the promotion of renewable energy technologies. Actually, all the projects reviewed show a genuine private sector involvement, although the degree and modalities of participation differ considerably from one project to another.

66. The goal of all the renewable energy projects reviewed is to support the penetration of the PV technology in relevant energy markets. These projects are based on the assumption that PV installations have a positive impact on greenhouse gas emission by replacing fossil fuels. Unfortunately, this assumption has not really been verified in any project thus far. The main rationale of most such projects is to help develop business opportunities through a financial package (loans, equity, or grants for technical assistance) to local equipment suppliers and distributors.

67. As a result, most of the projects reviewed in this section take a supply-side approach, although some of them include components directed toward the demand side. Local FIs are also involved in some of these market transformation projects, in order to facilitate the financing of potential end-user demand.

68. GEF has been particularly active and innovative in the modalities it has used to engage the private sector in the renewable energy field as well as in the financial instruments developed. Several projects were reviewed from this perspective for the present study.⁸ They fall under three categories: the setting up of private equity funds, the direct support to SME projects, and the use of a multicountry and multi-instrument facility.

Setting up of Private Equity Funds

69. In its 1999 policy paper on engaging the private sector in GEF activities (GEF/C.13/Inf.5) the GEF Council indicated several possible alternative financing mechanisms, of which “investment funds” may have been the most complex, and certainly the one that was based to the greatest extent on private sector principles. GEF funding (grant or nongrant) was intended to support for-profit, private sector environmental funds, with a possible return on capital and with the goal of leveraging commercial capital. The investment funding approach envisioned both debt and equity support.

70. The IFC, with its mandate for private sector investment, has led experimentation with investment funding in the GEF portfolio. In the renewable energy sector, the review team analyzed two such projects: the Renewable and Energy and Efficiency Fund (REEF) and the Solar Development Group (SDG).

71. The Renewable Energy and Efficiency Fund is arguably the most ambitious project in the portfolio of projects with private sector engagement. The project aimed to catalyze private sector investment, mostly in the renewable energy sector in emerging markets, by targeting both larger and smaller investment deals. The GEF cofinancing facility of about US\$23 million was intended for the smaller enterprise deals (less than 7 megawatts), as these are often more complex, yield lower absolute return, and are therefore less attractive to investors. Instead, however, the investors pursued a strategy of building a conventional investment portfolio with larger, more commercial, grid-connected renewable energy projects before turning to smaller projects. This strategy failed when such potentially profitable projects did not materialize. As a result, IFC had to close down REEF in 2002.

72. The SDG project aims to demonstrate that a traditional private equity/venture capital fund approach can overcome the key barriers to growth of PV in off-grid segments and attract private sector investors for increasing the delivery of solar PV systems to rural households and businesses in developing countries. It has two components: (1) Solar Development Capital Ltd. (SDC or the Fund—

⁸ These projects included the Grameen Shakti SME subproject; Solar Development Group; REEF; Soluz Honduras SME subproject, Photovoltaic Market Transformation Initiative (PVMTI), India; PVMTI Kenya; and the Uganda PV Project.

a private equity investment fund); and (2) Solar Development Foundation (SDF or the Foundation—a technical assistance entity).

73. The opportunities for equity investments in PV enterprises that met the Fund criteria were more limited than originally forecast. Expectations about returns were too optimistic, the project pipeline was overvalued, and the small- and medium-size companies targeted for possible equity or quasi-equity investments were still too immature and financially fragile. They needed longer periods of technical and managerial support from the Foundation before the Fund could be able to invest in their businesses. The project has been restructured to widen the scope of the Fund and to include debt, guarantees, and other nonequity instruments and to reduce Fund expectations regarding rates of return on investments. Even so, there is no evidence that the Fund will be able to place its total capital in suitable projects.

74. Although the two projects differ considerably in size, ambition, purpose, and financial and institutional structure, they both yield important lessons for any future engagement in equity investment. Some of the key challenges that require further thought include mobilizing resources, identifying bankable projects, and providing efficient fund management.

75. An impressive amount of private funding was mobilized in the initial equity funds (especially for REEF), through complex and time-consuming processes. In addition, a sizeable part of funding came from public sources. From this standpoint, REEF and SDG have achieved remarkable results. Although this might be due to incorrect expectations regarding rates of returns, it nevertheless demonstrates that private investors can be attracted to such public-private partnerships.

76. Both projects have been overambitious in their expectations of markets, rates of return, timeframes, and potential investors. Although funds were available, REEF faltered because of lack of investment prospects with rates of return deemed sufficiently high. Since the Fund was established on the basis of expectations that could not be met, it remains unclear whether it would have been possible to attract investors that would have been satisfied with more reasonable rates of returns, which in turn would have facilitated the fund manager's task.

77. Any equity or venture capital fund requires relatively complex management structures and mechanisms. That means that the choice of fund manager is a critical factor in the success or failure of the project. However, in reviewing examples of both kinds of projects, it is questionable whether the fund managers selected were the most qualified taking into consideration their experience and track record, or the size of the funds managed and their staff resources.

78. The need to develop the technical and business capacities and skills of the investors, local banks, and financial institutions was underestimated by GEF. In SDG, the work of the Foundation in technical assistance outweighed the capital investments of the Fund.

Direct Support to Local SME Projects

79. In facilitating the sale of renewable energy equipment by local SMEs, one of the main needs is to reduce the end users' investment cost to enable them to buy renewable energy equipment through the provision of adequate credit. In the Uganda PV project implemented by UNDP, this need has been

targeted in some cases by a credit facility granted to a local commercial bank. This facility was to be used for vendor financing in order to help the equipment suppliers procure PV systems in bulk, so that freight costs could be reduced and economies of scale achieved. But this process has not worked very well, due to the lack of creditworthiness of the borrowers and their inability or unwillingness to provide the collateral demanded by the bank.

80. In other cases, an interesting mechanism, already in place for other purposes, has been tested for the financing of PV sets purchased by rural customers. The pilot phase involves six so-called “village banks.” These are private microfinance institutions, granting very small and short-term loans (not more than six months) to their clients (that also have to be the lender’s shareholders), generally for productive activities which could quickly generate cash. According to the manager of one of these village banks visited, the system works well, with very few defaults, and is very flexible, adapting the reimbursement schedule to the actual cash generation. Some delays in payments can be experienced, but since the interest rate is high (4 percent a month), the borrower has an incentive to repay promptly. The limitation of these banks lies in their inability to provide large-scale loans, because they can only use the deposited savings of their clients. Therefore, the six village banks selected for the pilot phase have had access to a US\$350,000 revolving fund set up by UNDP. However, the sustainability of this financing mechanism will have to be analyzed at a later stage. This later analysis will need to account for results achieved in terms of number of PV sets financed and the loan default rate.

81. The review also encompassed the GEF/IFC SME Program, but since its objective was to experiment with different models of engaging the private sector at the SME level, the program was not assessed as a whole and only some of the subprojects were analyzed. Under this review framework, in the Climate Change area, the Grameen Shakti project in Bangladesh is another example of GEF efforts to overcome the barrier of lack of access to credit. The SME Program provided a loan with risk incentives and compensation to Grameen Shakti to develop sales and services network for PV systems for microenterprises in rural areas to generate additional and alternative income for system owners. Grameen Shakti has exceeded expectations in terms of PV systems sold. In addition, the World Bank is financing a major expansion of rural electrification through solar energy to target 64,000 systems in five years. However, there is still little evidence of private sector activity without government or donor support.

82. Another climate change project reviewed is the Soluz SME subproject in Honduras, which is aimed at developing the market for off-grid solar PV systems for rural homes by supporting a fee-for-service company, Soluz, Inc. GEF provided debt financing and a small amount of equity financing. Questions have been raised about the realism of the initial market assessments and ability to pay; furthermore, the company’s sales were badly affected in the start-up phase by hurricane Mitch in 1998. It appears that many of the homes targeted expect to be connected to the grid in the near future as a result of government policy to extend the grid to these areas. This development threatens to undercut the project’s rationale.

The Use of a Multicountry, Multi-Instrument Facility

83. The example reviewed during the study is the Photo Voltaic Market Transformation Initiative (PVMTI) project, which is intended to be “a strategic intervention to accelerate commercialization and financial viability of PV technology in the developing world.” It consists of “selected concessional investments in private sector market development projects” in three countries, India, Morocco, and Kenya. The main goal of the ten-year project is “to provide successful examples of sustainable and replicable business models than can be financed on a commercial basis.” The current review focused only on a small subset of the 12 businesses that were operational at the time.

84. PVMTI India provides a mix of equity, concessional debt, partial risk guarantees, and small amounts of contingent grants and equity funding that becomes grant funding if the businesses do not become profitable. The Solar Electric Light Company (SELCO), the most recently approved participant, is said to be more heavily reliant on end-user finance and may add to PVMTI-induced expansion of end-user finance. However, participants seem to be focusing mostly on retail sales of PVs for streetlights, power packs, and power plants, and less on the solar home systems (SHS) market, which requires high-risk term finance. Another participant, Shell Solar India, is focused on SHS sales, both on credit and with full payment. It had sold 4,500 SHS by the end of FY03 (Project Implementation Review 2003).

85. In Kenya, at the time of the visit (January 2003), the deals under the subprojects had almost exhausted the US\$5 million allocated to the country by the PVMTI facility. Most deals provided credit facilities to the Savings and Credit Cooperatives (SACCOs) which on lend to their members (essentially tea farmers) through a microfinance approach.

86. Regarding private sector involvement, it is difficult to make a definitive judgment because of the very slow pace of implementation of PVMTI. As of this review only US\$7.2 million or about a third of the grant has been disbursed, but the program has been extended to 2010. Therefore it is probably premature to look towards PV activities generated by subprojects beyond those funded by PVMTI itself, since the program is now seeking an extension of its duration to allow for disbursement of committed funds. Currently no significant market transformation can be demonstrated and the penetration of PV systems as a result of the project remains limited. A small number of equipment suppliers are on the market, but often PV trading is a marginal activity alongside their core business. Finally, the banks are slow to consider the PV sector as a market niche deserving more investment and risk on their side.

Conclusions

87. All the off-grid solar PV projects reviewed have shown a very slow pace of implementation. One of the reasons for this is certainly that the demand for PV sets in targeted countries is much lower than expected, as a result of prices that are not affordable to the majority of the targeted population. Based on the present status of the projects reviewed, extended GEF support for end-user financing will only marginally remove this barrier. The most ambitious GEF project in the portfolio of private sector projects, the Renewable Energy and Efficiency Fund, has failed to invest in potentially profitable

projects. Another large project, the Solar Development Group, has been restructured. A review of 17 PV projects in Africa by UNDP concludes that “PV system delivery, and the broader question of delivery of energy services, remain challenges for policy makers, program designers, investors, and rural communities that have not yet been solved.”⁹

88. In addition to costs, which prohibit entry for the majority of the rural populations, other drawbacks may limit the development of the PV market. Examples are the low voltage and the narrow range of usage provided, as are the inability to replace the traditional way of cooking, maintenance problems (especially for the batteries), and especially the limited positive effect on the environment, including GHG emission reductions. In addition, provision of maintenance and other services to dispersed rural populations is expensive, adding more costs to the rural energy delivery business model. Solar PV expansion has also been limited because many of the targeted clients expect to be connected to the grid and have sought to influence government policies to that effect.

89. Except in one case, PV manufacturers have not been involved in market creation activities. They are more interested and focused on industrial country markets, where governments subsidize large on-grid PV projects. In addition, other actors like distributors and installers are generally too weak financially to be able to play a key role. PV projects should therefore be more thoroughly assessed during the design phase.

90. The renewable energy projects reviewed have utilized a mix of financial instruments including grants, debt financing, and some equity and partial risk guarantees. No clear conclusions about the usefulness of the individual financial modalities can be reached. Determining whether the mix of instruments employed for a given project is optimal and whether the degree of concessionality offered is adequate, would require scrutiny of business plans, financial models, and legal agreements. However, sound business plans for the ventures supported appears to have been more important for project results than the mix of financial instruments, even if the use of the appropriate financial modalities may be decisive in individual cases.

V. BIODIVERSITY

91. GEF’s private sector engagement in the biodiversity focal area has become much more dispersed across a larger number of approaches than has its private sector engagement in the climate focal area. That is because a number of different types of potential markets for goods and services that are relevant to biodiversity conservation exist in the biodiversity focal area. These include markets for ecotourism, agroforestry commodities, environmental services in general, and for biodiversity conservation on private lands.

92. GEF has supported a total of 18 regular biodiversity-related projects that have a substantive component of private sector engagement. In addition, the SME Program funds several biodiversity-

⁹ Mark Hankins, 2004, “Choosing Finance Mechanisms for Developing PV Markets: Experiences from Several African Countries,” UNDP, January 21.

related projects. Field visit reports were written for 8 regular projects or SME subprojects: Costa Rica Cacao Agroforestry; El Salvador Coffee and Biodiversity; Guatemalan Environmental Conservation Trust (FCG); Honduras Pico Bonito Ecotodge; Costa Rica Foundation for the Development of the Central Volcanic Mountain Range (FUNDECOR); Costa Rica Ecomarkets, Uganda Kibale Forest Wild Coffee; and Poland Caresbac.

93. This section of the review examines GEF experience in engaging the private sector in biodiversity conservation by using four general approaches: certification of agroforestry commodities, ecotourism, payments to landowners for sustainable forest management, and private lands conservation. The purpose is to assess how well each of the approaches has worked, what major issues are raised about the approach in each case, and what lessons, if any, can be drawn from the experience thus far.

94. The private sector and market impact of GEF projects on the biodiversity focal area invite different questions than in the climate focal area. Owners of land on which biodiversity is found do not seek out markets for the biodiversity, even after participation in GEF projects; they must be approached, in effect, by the market, although projects may make other landowners aware of the possibility of benefiting from agreements that conserve biodiversity. And producers of shade-grown coffee may be interested in finding markets, but the market may not be interested in the biodiversity at issue. Only in the ecotourism venture is there an obvious connection with encouraging private sector investment in biodiversity conservation. The specific questions to be asked about impacts on private sector actors and the market must therefore be different from those asked about projects in the climate area.

Certification of Agroforestry Commodities

95. One approach to using private sector engagement to support biodiversity conservation is to encourage farmers to grow commodities (such as cacao and coffee) within cultivation systems that conserve habitats for biodiversity by promoting certification and marketing of commodities that meet minimum biodiversity criteria. The GEF project has taken this approach in four projects and two subprojects. The major projects are the El Salvador Coffee and Biodiversity project, the Mexico El Triunfo Biosphere Reserve, the Biodiversity Conservation in Cacao Agroforestry project in Costa Rica, and the Uganda Kibale Wild Forest Coffee. The two subprojects are from the SME Program: the Guatemalan Environmental Conservation Trust (FCG) subproject in Guatemala, and the Conservation International capital financing facility in the buffer zone of the El Triunfo Biosphere Reserve.

96. The goal of certification of agroforestry commodities is to shift supply from non-certified products to certified coffee or cacao, thus providing an incentive for farmers to maintain or adopt sustainable production practices and conservation landscapes. Five of the six certifications aimed farmer certification through some combination of paying the costs of certification; assisting in developing certification criteria; providing technical assistance to the farmers to adopt different techniques of agroforestry management; and increasing farmers' knowledge of markets for certified production and capacity, thus helping to capture a premium price in those markets.

Potential Biodiversity Conservation Benefits

97. Supporting the biological and economic sustainability of cacao and coffee cultivation may be of great significance to biodiversity conservation in countries such as El Salvador and Costa Rica, where very little of the original forest cover remains and where protected areas consist of relatively small fragments of natural forest. Under these conditions, coffee plantations in particular may provide habitat for a large proportion of the remaining biodiversity in the country. In El Salvador, for example, the area on which coffee is cultivated is ten times larger than entire system of government-protected areas.

98. Production of high-grown Arabica varieties in the neotropics often coincides with the ecosystems where biodiversity is extremely high, giving coffee farmers potentially important roles in maintaining the buffer zones surrounding protected areas or the protected areas themselves. A wide range of independent research support the high biodiversity potential for coffee and cacao plantations, if properly managed, thus providing valuable habitat for flora and fauna that might otherwise be threatened.

99. The ability of shade coffee farms to provide such habitat depends on whether the plantation is “rustic” or “traditional” polyculture (established beneath thinned primary or old secondary forest), diverse commercial polyculture, simplified commercial polyculture, or “shaded monoculture.” For both coffee and cacao, the closer the plantation is to natural forest, thus providing a buffer zone or corridor for that forest, the greater the range of biodiversity it will support. Biodiversity is reduced to very low levels in shaded monoculture cultivation.¹⁰

100. Ecological theory as well as empirical evidence suggests that the richness of bird species in traditional coffee systems is comparable to or even better than that found in some natural forests.¹¹ Rustic or traditional polyculture and diverse commercial polyculture coffee plantations, which provide habitats for much larger numbers of species, are particularly important for resident bird species in Central America as well as migrants from North America. Most of the 128 species of birds found only in El Salvador forest habitats are also found in shade coffee plantations, including 2 that are considered threatened and 24 considered vulnerable at the global level.¹² However, research on birds in coffee plantations of different levels of complexity and different locations also indicates that distance from continuous forests sharply reduces bird species.¹³

101. Much less data is available on the biodiversity benefits of shade coffee plantations for other faunal species, and no careful comparisons across different levels of complexity in such systems are

¹⁰ Robert A. Rice and Russell Greenburg, 2000, “Cacao Cultivation and the Conservation of Biological Diversity,” *Ambio* 29(3), pp. 168–169.

¹¹ Merle D. Faminow and Eloise Ariz Rodriguez, 2001, “Biodiversity of Flora and Fauna in Shaded Coffee Systems,” report prepared for the Commission on Environmental Cooperation, May, p. 20.

¹² Juan Marco Alvarez, 1999, “Promoting Shade Grown Coffee as a Mechanism to Improve Buffer Zone Management and Biological Corridors”, Paper presented to the 1999 Environmental Leader’s Forum, New York, 1–9 June.

¹³ Dina L. Roberts, Robert J. Cooper, and Lisa J. Petit, 2000, “Flock characteristics of ant-following birds in premontane moist forest and coffee agrosystems,” *Ecological Applications* 10: pp. 1412–1425.

available. What is known, however, is that the biodiversity benefits of those coffee systems less complex than diverse commercial polyculture systems are quite limited, as species richness drops off very dramatically in such habitats.¹⁴ Furthermore, the fragmentation of farms and the variety of cover between them may not be adequate to provide such habitats. Research on how well coffee farms are maintaining species' populations was still underway in early 2003.¹⁵

102. It is evident that the potential for biodiversity benefits from encouraging biodiversity-friendly coffee cultivation is very significant, particularly in countries such as those in Central America where deforestation is very far advanced. However, achieving these benefits is highly dependent on certain minimum levels of tree canopy and diversity in the plantation as well as location close to continuous natural forest. The variation in biodiversity in different types of cultivation systems is very important, because the cultivation systems with higher levels of biodiversity do not necessarily constitute the majority of farms. In El Salvador, for example, the rustic and diverse commercial polyculture systems combined account for only one-fourth of the entire coffee area.¹⁶

The Global Coffee Market and Biodiversity-Related Certification

103. The second major issue surrounding the use of certification of agroforestry commodities as an instrument for biodiversity conservation is whether present and foreseeable global economic trends support or undermine such an approach. This question has two primary aspects: the problem of prices for coffee and cacao, and the problem of establishing a niche market for biodiversity-friendly coffee that meets minimum standards for biodiversity conservation.

104. The dominant feature of the global coffee economy is the collapse of coffee prices in recent years. In 2000 and 2001, coffee prices fell to their lowest level in 30 years, to well below the costs of production even for the most efficient farmers. In 2002, the gap between production and consumption of coffee grew even larger than it had been the previous year. The chronic oversupply of coffee in the world market is the result of technical innovations, massive increases in production by Vietnam, and market liberalization in the 1980s and 1990s in coffee producing countries that had once regulated coffee stocks through market and control boards.

105. One immediate result of the price crisis is massive abandonment of coffee farms by small farmers and unemployment for hundreds of thousands of coffee workers. That means that many of the farmers who might otherwise have been inclined to take advantage of the opportunity to be certified for a biodiversity-friendly system of cultivation have either abandoned coffee growing altogether, or, even

¹⁴ Faminow and Rodriguez, "Biodiversity," p. 19; Alexandre H. Mas and Thomas V. Dietsch, in press, "Linking Shade Coffee Certification Programs to Biodiversity Conservation: An Evaluation of Criteria Using Butterflies and Birds in Chiapas, Mexico," pp. 23–24; S. Gallina and A. Gonzalez-Romera, 1996, "Conservation of Mammalian Biodiversity in Coffee Plantations of Central Veracruz, Mexico," *Agroforestry Systems* 33 (1): pp 13–27.

¹⁵ Juan Pabo Dominguez Miranda, author of the biological study, pers. comm., February 2003.

¹⁶ Juan Marcos Alvarez, 1999, "Promoting Shade Grown Coffee as a Mechanism to Improve Buffer Zone Management and Biological Corridors," paper presented at the 1999 Environmental Leader's Forum, Columbia University, 1–9 June, on the Web at <http://biodiversityeconomics.org/business/001007-08.htm>

worse, have tried to achieve greater yields and thus greater profitability by shifting to sun-grown coffee.¹⁷ The disastrous fall in coffee prices had a major impact on the El Triunfo Biosphere Reserve project, as a large-scale northward migration of coffee farmers from the project area occurred, including about half the local leaders in coffee production. That damage to the social and economic fabric of the community has seriously reduced local capacity to carry out the project, according to the World Bank task manager.¹⁸ Another consequence of the crisis is that farmers have cut down and sold part of their shade forest as timber or firewood, or have cleared coffee plantations and surrounding areas in order to plant new crops.¹⁹

106. Since prices for coffee in the major consuming countries have remained stable or even increased since the price crisis began, in theory projects employing certification for shade-grown biodiversity-friendly coffee could work, even with local prices at an all-time low. Under these circumstances, any price premium for such certified coffee would be even larger in relation to the base price than in normal circumstances, making it even more attractive to coffee growers. The larger and more troublesome question, however, is whether a functioning market for biodiversity-friendly shade-grown coffee exists or is likely to come into being in the next few years.

107. Two coffee cultivation certification systems have been established based specifically on biodiversity criteria: the Rainforest Alliance Eco-O.K. system, and the Smithsonian Migratory Bird Center's "Bird friendly" criteria. The latter system has been independently reviewed based on its application at two sites in Mexico, and was found to allow the certification of only the more diverse polycultural cultivation systems, whereas the Eco-OK system was found to allow certification of the simplified commercial polyculture, which has relatively low levels of biodiversity. The Eco-O.K. system has consciously steered away from strict standards in order to work with much larger numbers of coffee farmers in the hope of convincing them to move toward greater sustainability.²⁰

108. Neither of the two certification systems, moreover, have succeeded in linking up with a market that offers coffee farmers a price premium for meeting biodiversity-related standards for their shade systems. No such price premium is available, because consumer awareness of the necessary distinctions is still nonexistent. Lacking a price premium that is specifically linked to management of their cultivation systems, coffee farmers have no economic incentive to make any changes to conform to the criteria or to maintain them in the face of economic pressures to shift toward sun-grown or monoculture systems of coffee cultivation. Even specialists on coffee and biodiversity who strongly support certification as an approach to encouraging sustainable coffee cultivation agree that, in the absence of a link between

¹⁷ Stacy M. Philpott and Thomas Dietsch, 2003, "Coffee and Conservation: A Global Context and the Value of Farmer Involvement," *Conservation Biology* 17(6): p. 1844.

¹⁸ Telephone interview with Theresa Bradley, World Bank Task Manager, December 15, 2003.

¹⁹ Pano Varangis, Paul Sieel, Daniele Giordannucci and Bryan Lewin, 2003, "Dealing with the Coffee Crisis in Central America: Impacts and Strategies," World Bank Policy Research Working Paper 2993, March, p. 10.

²⁰ Alexandre H. Mas and Thomas V. Dietsch, "Linking Shade Coffee Certification Programs to Biodiversity Conservation: An Evaluation of Criteria Using Butterflies and Birds in Chiapas, Mexico," [COMPLETE CITE].

biodiversity-related criteria for certification and price premiums for achieving or maintaining such standards, coffee certification programs will ultimately fail to provide biodiversity benefits.²¹

Certification in GEF Coffee-Related Projects

109. Four GEF projects dealing with coffee farms have the development of certification programs included as central elements of their efforts to encourage an increase in biodiversity-friendly coffee cultivation systems. Each of the projects, however, has approached the issues in different ways.

110. The El Salvador Promotion of Biodiversity within Coffee Landscapes sought to “increase the extent of coffee plantations under biodiversity-friendly shade regimes to serve as habitats for globally significant biodiversity” by development of a certification program for “biodiversity friendly coffee.” Test marketing and market development for such coffee were two of the four major activities to be supported.

111. The Mexico El Triunfo Biosphere Reserve project’s sustainable production systems component revolved around the idea of certifying coffee that would be both organic and “biodiversity friendly” (with diversified shade cover), thus providing an incentive to local farmers to maintain existing coffee cultivation techniques that are compatible with conservation goals.

112. The SME subproject implemented by Conservation International in the buffer zone of the El Triunfo Biosphere Reserve in Mexico is also aimed at providing an economic incentive to the farmers for changes in growing practices. The benefits to farmers are credit for post-harvest expenses as well as better prices from buyers, especially from Starbucks, in return for the farmers adopting improvements in their growing practices.

113. The Uganda Kibale Forest Wild Coffee project envisioned the preparation of a system of controls to achieve the certification of Kibale coffee as a specialty coffee, whether organic, “fair trade,” or some other ecologically related label, with a strategy of forming alliances with environmental organizations. It was much less clear than the other two projects in its assumption about the relationship between certification and the evolution of shade systems.

114. The results of GEF coffee certification projects have reflected this larger difficulty of achieving biodiversity benefits via commodity price premiums. Thus the El Salvador Promotion of Biodiversity within Coffee Landscapes project had to choose between certification that did not focus exclusively or even primarily on biodiversity criteria, and no certification at all. It chose to sell its certified coffee under the Rainforest Alliance certification label, which evaluates coffee farms on the basis of nine broad issues, using more than 80 criteria, and as many as 200 indicators, of which just 5 represent the indicators of structure and density of the shade system. Certification requires a total score of 800 out of a possible 1,000 points, so the farm can be certified without meeting minimum biodiversity requirements.²² Thus

²¹ Philpott and Dietsch, “Coffee and Conservation,” p. [].

²² Juan Marco Alvarez, Executive Director, SalvaNATURA, personal communication, February 11, 2004;

the El Salvador project offered no incentive either to improve cultivation systems or even to maintain systems against economic pressures to further reduce biodiversity in the shade system.

115. The El Salvador project is executed by the Ecological Foundation of El Salvador (SalvaNATURA), which argued that, without certification-based access to premium prices, coffee farmers would not have the incentive to maintain their existing coffee farms, and their role as buffers surrounding the national parks would be lost.²³ Whether certification would help prevent the loss of these areas, however, is a moot question, because the project was able to certify only a small fraction of 300 coffee farms in the area of the biosphere reserve, even under the broad Rainforest Alliance certification system. By 2003, two years after the project ended, only 44 farmers were certified? just twelve percent of the total. This difficulty in motivating farmers to become certified has continued, despite the fact that the Rainforest Alliance has been able to make deals with major coffee roasters and other buyers that have provided premium prices for their certified coffee. The main problem in motivating coffee farmers to seek certification has been that high-quality coffee from El Salvador now has access to premium prices in the specialty coffee market without any certification, so it is more lucrative for most of the farmers not to obtain certification.²⁴ Therefore, even if biodiversity criteria were more central to the Rainforest Alliance certification system, it would have little impact in El Salvador. The availability of cheaper alternative methods of getting access to markets that pay premium prices for quality coffee makes certification irrelevant to the aim of maintaining some buffer zone around the national park.

116. The implementation staff of the Mexico El Triunfo Biosphere Reserve project recognized early on that a biodiversity-friendly label for coffee would not have a sufficient market in major coffee consuming countries to support such certification. They understood that they would not have been able to provide a certification price premium for biodiversity-friendly cultivation systems. Instead the staff chose to piggyback on the organic coffee market. Although the price premium for coffee certified as *organically* grown has actually increased, the economic incentive for more biodiversity-friendly cultivation or resistance to less friendly systems was again absent.

117. The project did not adopt any explicit measurement of the impact of the Rainforest Alliance certification on biodiversity value of the coffee farms in the project area. As an indicator of the sustainability of coffee production, it chose the increase in average net income of small producers “through diversified and biodiversity friendly production systems based on coffee.” That indicator could not provide any information on what level of biodiversity existed in the coffee cultivation systems in question, or who participated in certification before and after the certification. Even though most coffee farms in the biosphere reserve might well have had more dense and complex shade structures at the outset, it does not follow that the organic coffee certification prevented any reduction in the biodiversity of the cultivation systems because of other economic pressures.

²³ Alvarez, “Promoting Shade Grown Coffee.”

²⁴ Alvarez, pers. comm.

118. The Uganda Kibale Wild Forest Coffee project was originally designed to produce an organic certification system that would provide a self-sustaining incentive for cultivation of coffee in biologically diverse shade systems, while providing a stream of income to support Kibale National Park. Like the other coffee projects supported by GEF, it failed to recognize that there was no market specifically for coffee certified as having been produced in biologically diverse shade systems. Although the project had two coffee harvests certified as organic, it provided no incentive for biodiversity conservation, and the project team quickly abandoned the idea for other marketing approaches, such as “Fair Trade” coffee, which have nothing to do with biodiversity conservation. In the end, the task manager for the project acknowledged that “Certification alone does not make coffee competitive.”²⁵ Furthermore, the type of coffee grown in and around was Robusta rather than the Arabica varieties demanded by the specialty market.

119. The aim of the SME subproject implemented by Conservation International in Mexico was to provide financing for shade-grown coffee in the hope that the coffee farmers would adopt certified practices over the long run. No certification system was involved in the project, however. The farmers can obtain a “bonus” price for their coffee production from Starbucks, which appears on the surface to be the equivalent of a price premium, but it is based only very loosely on biodiversity-related criteria. The criteria used to determine whether a farmer gets the bonus price are not rigorous thresholds in regard to the complexity of the shade system, and biodiversity criteria are only part of social and environmental benefits that are taken into account. Furthermore, the bonus depends more on the quality of the coffee than anything else. It is not a pass-fail system but rewards farmers who are believed to be improving. According to Russell Greenberg of the Smithsonian Migratory Bird Center, the Conservation International program “allows for entry with minimally diverse shade management” and has “no specific marketplace incentives” for improvement.²⁶

120. Thus all three full GEF projects based on *introducing* certification for biodiversity-friendly coffee and the SME subproject dealing with “conservation coffee” have had to abandon the idea of using certification for biodiversity-friendly coffee cultivation as an approach for improving or maintaining existing levels of shade. Whatever the advantages and disadvantages of the various alternative approaches adopted, the idea of certification of coffee on the basis of biodiversity criteria is at present unworkable.

121. In responses to an earlier draft of this report, one reader argued that it should not matter whether the price premium provided by certification of coffee farms is for organic or fair trade coffee rather than for biodiversity-friendly coffee, as long as the end result is that it at least maintains existing levels of shade. That would be true, however, only if the GEF could ascertain that the coffee farms in question already had a certain minimum level of habitat and that other economic pressures were not

²⁵ Kibale Forest Wild Coffee Completion Report, June 5, 2002, p. 7.

²⁶ Matthew Quinlan, Conservation Coffee Program Director, Conservation International, personal communication, December 19, 2003; Russell Greenberg, “Criteria Working Group Thought Paper,” paper based on the criteria .

tending toward a reduction in shade. Neither of those conditions can be assumed without a system of verification based on biodiversity-related criteria.

A GEF Role in Market Creation?

122. This raises the question of whether GEF should work on creation of a genuine market for biodiversity-friendly shade-grown coffee, so that certification of coffee cultivation systems could be used an approach to biodiversity conservation. Although GEF could consider playing a catalytic role in promoting a biodiversity-based certification system outside its project portfolio, the obstacles to creating such a market should not be underestimated. The Fair Trade and organic coffee markets have a very long lead in market development, and large institutions are already joined in collaborating under those banners. Although the Smithsonian Migratory Bird Center and biodiversity specialists themselves have been advocating such market development for over a decade, they have recognized that the best chance of achieving the goal is to integrate explicit biodiversity standards for shade systems into organic certification as minimum requirements.

123. The organic coffee subsector, however, has been very leery of taking on the issue of shade, because of the fact that coffee marketers have already created a niche market for “shade-grown coffee” that is not based on either biodiversity-related criteria or on certification. Much of that market is now served by coffee grown in shade systems that are little different from “sun-grown coffee” systems.²⁷ Dishonest marketing of “shade-grown” coffee, combined with the growth of labels claiming ecological or conservation status, makes it especially difficult to create a separate market for biodiversity-friendly coffee at this stage.

124. Efforts have been made over the past decade to combine the Smithsonian “Bird-friendly” certification system with the other major certification systems. But proponents of the Fair Trade and Eco-OK programs have invested heavily in money and identity in their own separate labels, and are extremely reluctant to consider having them absorbed into a broader label in which that identity would be lost. Similarly, companies that have invested in promoting one of the existing initiatives are unwilling to embrace a new initiative that explicitly makes biodiversity an equal objective. Furthermore, many in the specialty coffee business are concerned that the Smithsonian’s criteria are too strict and would therefore exclude many coffee-growing areas in Central America and Brazil.²⁸ Although the idea of formally incorporating biodiversity-related criteria as a central component of broader coffee certification schemes is still being discussed, it is unlikely to be accepted by the existing niche markets. Any effort to create a biodiversity-friendly coffee market will almost certainly have to be done without any cooperation from markets which are much more established.

²⁷ John H. Rappole, David I. King, and Jorge H. Vega Rivera, 2003, “Coffee and Conservation,” *Conservation Biology* 17(1): p. 335; Rappole, King, and Rivera, 2003, “Coffee and Conservation III: Reply to Philpott and Dietsch,” *Conservation Biology* 17(6): p. 2; Paul D. Rice and Jennifer McLean, “Sustainable Coffee at the Crossroads,” 1999, white paper prepared for The Consumer’s Choice Council, October 15, p. 64, on the Web at <http://www.consumerscouncil.org/coffee/coffeebook/coffee.pdf>.

²⁸ Rice and McLean, “Sustainable Coffee at the Crossroads,” pp. 113–116.

Certification and Cacao

125. Cacao, like coffee, is grown with and without shade along a spectrum from rustic farms to intensively managed plantations. Rustic cacao is grown under thinned primary or older secondary forest rather than in replanted shade, and the habitats maintained by such cultivation systems are quite similar to degraded tropical forests in floral and faunal composition. However, cacao is also cultivated without shade in Columbia, and Peru, where the practice is becoming more widespread, as well as in Malaysia. Although much less research has been done on differences in levels of biodiversity among the different types of cacao management systems than in coffee cultivation systems, the same relationships between the floristic and structural diversity of the shade and the level of biodiversity found in coffee cultivation are believed to apply to cacao systems.²⁹

126. At present, strong economic incentives exist for cacao farmers to convert their farms into low-diversity shade or sun systems of cultivation, as in the case of coffee producers. Therefore, economic incentives are needed to encourage farmers not only to remain in cacao farming but also to maintain high-biodiversity shade systems.

127. The economics of a specialty market for cacao are quite different than for coffee, because cacao prices have been relatively high in relation to historic norms. As a result there has been no price premium for specialty cacao in recent years. The niche market in cacao is for organic production rather than certification based on biodiversity-friendly cultivation systems as in coffee. There is no existing cacao certification for biodiversity, and no possibility of a price premium to reward the relatively high value of cacao production in terms of providing habitat for wildlife.

128. The Biodiversity Conservation in Cacao Agroforestry project in Costa Rica, like the coffee certification projects, was premised on the idea that the biodiversity value of cacao production could be rewarded through certification based on biodiversity criteria. Like the coffee projects, cacao failed to overcome the structural impediments to using certification or any other marketing scheme to provide an economic incentive for maintaining biodiversity-friendly production. As in the case of the coffee projects, the Cacao Agroforestry project had to depend on organic certification.

129. In some cases, cacao plantations might be valuable not only as species habitats but as buffer zones protecting natural forests from forces causing deforestation. This was not the case, however, in the Costa Rica Biodiversity Conservation in Cacao Agroforestry project. The field visit to the project showed that the surrounding forests are in no immediate danger of being logged, because they are too remote and inaccessible, given the lack of roads.

²⁹ Russell Greenberg, 2003 "Biodiversity in the Cacao Agroecosystem: Shade Management and Landscape Considerations," on the Web at <http://nationalzoo.si.edu/ConservationAndScience/MigratoryBirds/Research/Cacao/greenberg.cfm>.

Conclusions

130. The biodiversity benefits in coffee and cacao certification projects depend heavily on coffee farmers meeting minimum criteria for shade systems, because the benefits drop off precipitously below a certain level of complexity of the system.

131. There is no niche market for coffee grown in shade that meets certain minimum biodiversity-related criteria, such that a price premium could be made available to growers meeting those standards. Without such a price premium, projects for certification of shade-grown coffee would be unable to provide an incentive for coffee farmers to achieve minimum levels of shade complexity and other biodiversity-related criteria.

132. The use of certification as a mechanism for encouraging biodiversity-friendly coffee or cacao cultivation is not a viable model at present for engaging the private sector in the biodiversity focal area. Although the coffee and cacao sectors still offer the potential for significant biodiversity conservation benefits, the approach that is most likely to be successful in this regard is one in which partnerships with companies importing the commodities are incorporated in a broader framework of community-based approaches to working with farmers in and around the buffer zones of protected areas.

Recommendations

133. GEF should not finance new projects aimed at certification of coffee, cacao, or other commodities unless the certification system meets acceptable minimum biodiversity criteria, or unless GEF could decisively influence the establishment of and the adherence to such criteria. GEF should continue to study carefully the evolution of the markets in order to determine possible other roles in relation to the various actors.

Ecotourism

134. Encouragement of private sector investment in ecotourism is a second approach to private sector engagement in biodiversity that has been tried by the GEF. Successful ecotourism projects not only minimize or avoid negative impacts of tourists on the environment, but also contribute to conservation. They do this by providing a source of additional revenue (for example, through surcharges on tourist hotel occupancy) for dedicated conservation funds that benefit nearby protected areas and by helping to sustain the well-being of local people in a way that reduces their impacts on ecosystems from economic activities.³⁰

³⁰ Michael C. Rubino with Diana Propper de Callejon and Tony Lent, 2000, "Biodiversity and Business in Latin America," Discussion Paper, Environmental Projects Unit, International Finance Corporation, Washington, D.C., p. 26.

135. Several approaches to investment in ecotourism have been found to maximize the likelihood of biodiversity benefits or financial sustainability, or both.³¹

- integration of ecotourism operations into a broader bioregional planning framework;
- development of multiple sites in a region by the same investors;
- offering exclusive rights for concessions and lodging in or around a protected area to an operator, in return for a portion of the profits to be earmarked for conservation; and small luxury operations.

136. The GEF/IFC SME Program has several subprojects that support ecotourism operations as a means to support conservation. These projects are the Lodge at Pico Bonito, which is in a buffer zone of the Pico Bonito National Park in Honduras; nine small ecotourism operations in Guatemala supported through the multi-NGO Fideicomiso para la Conservacion en Guatamala (Guatemalan Environmental Conservation Trust, or FCG); and ecotourism investments in Tanzania and Zimbabwe. Of these subprojects, the review team visited only the Lodge at Pico Bonito and the FCG subprojects.

137. The Lodge at Pico Bonito subproject is based on the multisite business model referred to above. It is the first of four lodges to be built under the “Mundo Maya” concept in Central America, with the other three to be built in Belize and Guatemala. Marketing and management of the concept was considered to be essential for its profitability. It is also located in one of the most important biodiversity hotspots in Honduras and provides important habitat for jaguars. A GEF/IFC SME program loan was extended to Wilderness Gate (a group of three investors based in Chicago), but a much larger share of the investment in the project came from the investors themselves. The GEF/IFC financing for the project is contingent, with repayment conditions dependent on certain financial and environmental performance targets.

138. The largest of the FCG subprojects involved an \$85,000 loan for development of two sites: a canoe trip down canals through a 300,000 hectare mangrove forest designated as a Ramsar site, and an eco-lodge in a mountain-top site overlooking one of the last patches of original forest cover in the municipality and near a Mayan civilization ruin. Other ventures are small-scale and include cabins, lodges, fish breeding ponds, and ecoparks.

Market Risks of Ecotourism Investments

139. Like any other product or service, ecotourism is subject to a range of market risks affecting the likelihood that GEF support for a particular investment will produce biodiversity benefits. As part of the broader global tourism industry, ecotourism has and will benefit from the long-term trend of growth in the numbers of people interested in nature-related travel activities, especially aging, well-educated

³¹ Rubino and others, 2000, pp. 27, 30.

populations in Europe, Japan, the United States, and Australia.³² However, the tourism industry in general is also subject to market risks affecting its financial health for varying periods of time, including wars, outbreaks of disease, terrorism, and economic downturns. The 1991 Gulf War, the Kosovo conflict in 1999, and the foot-and-mouth disease outbreak in the United Kingdom in 2001 are all examples of events that have caused sudden downturns in the industry. The terrorist attacks of September 11, 2001 in the United States were a particularly serious shock, causing a loss of 0.5 percent in tourist arrivals worldwide in 2001 compared with 2000. By their very nature, such shocks cannot be anticipated by investors, financial intermediaries, or the GEF.

140. What can be estimated, however, is the degree of risk attached to any particular ecotourism venture in competing in a market that is segmented by region, by country, and by different degrees of demand for luxury, hygiene, safety, and security. Without a careful analysis of market risk, the chances that an investment will be a financial failure are much higher. The rate of failure of ecolodges in developing countries is estimated at 90 percent.³³ The assessment of likely profitability must take into account at least five major factors:

- destination;
- value;
- interpretation capabilities;
- accessibility; and
- management capacity.

141. Along with access to capital these are the factors that the first systematic study of markets for and business success of ecolodges, completed under contract with IFC, found to be most important determinants of profitability.³⁴

142. Destination is regarded as the single most important factor in the success of ecolodges. Ecotourists prefer certain countries because of their natural attractions, good environmental policies, safety, and tourism infrastructure. An ecotourism site that is not located in a country that has been recognized as a popular destination will face far more difficulty in becoming profitable than one located in a favored tourist destination. Destination is a factor over which the management of the ecolodge has little control. Efforts to overcome the disadvantage of a less favored destination through marketing may be expensive and ineffective.

143. The Lodge at Pico Bonito National Park, Honduras, illustrates the importance of this risk in investing in ecotourism ventures. The prospects for The Lodge to become financially sustainable depend in large part on the ability of the tourist operations to compete with ecotourism ventures for a

³² Megan Epler Wood, Pamela A. Wight and Jeanine Corvetto, 2003, "A Review of International Markets, Business, Finance and Technical Assistance Models for Ecolodges in Developing Countries," Draft Final Report for GEF/IFC Small and Medium Enterprise Program, December, pp. 11–12, 17–18.

³³ Megan Epler Wood, personal communication, February 13, 2004.

³⁴ Wood, 2004, p. 57.

comparable clientele in Costa Rica. That in turn depends on competition between Honduras and Costa Rica as an ecotourism destination. Nature tourists, like tourists in general, have tended to prefer Costa Rica, because of its amenities, higher degree of socioeconomic development, and better ecological policies, especially with regard to biodiversity conservation.

144. The Lodge at Pico Bonito thus had a serious disadvantage to overcome in seeking to achieve commercial viability. It hoped to overcome the challenge of its location by appealing to a wealthier clientele through favorable coverage in upscale travel magazines. However, it is still far from meeting its targets for occupancy rates in its first four years of operation. This difficulty might be attributed in part to the impact of the September 11 terrorist attacks on travel and tourism in general. However, the statistics of the World Tourism Organization show that Central America in general (dominated by Costa Rican tourist destinations) actually increased its tourist arrivals by 1.7 percent in 2001 and by 6.4 percent in 2002.³⁵ Furthermore, a survey of 15 international recognized ecolodges, which were broadly representative of successful small ecotourism and ecolodge businesses, found that their sales did not decrease after September 11, and some insisted that demand for their product was essentially inelastic.³⁶

Biodiversity Conservation Benefits from Ecotourism Projects

145. The biodiversity conservation benefits of a given ecotourism project depend on both the interactions between the project's activities and the surrounding ecosystem, and on supportive government policies. A framework for analyzing the potential or likely benefits requires knowledge of the important biodiversity in the area surrounding the ecotourism venture, the types of interactions that can be expected between the project's activities and the biodiversity, and the likely impact of government biodiversity policy and implementation on the biodiversity.

146. If the government does not provide resources and enforcement to protected areas, but allows them to be overrun by illegal loggers, agricultural producers, and hunters, the ecosystem—and the undisturbed natural scenery that is needed to attract tourists—may well be seriously degraded over time. Even though such activities are not under the control of the project, they must be taken into account in anticipating likely project benefits, because benefits that would otherwise be provided by the project can be eroded or even destroyed by government failure to protect biodiversity.

147. The policy environment at the Pico Bonito National Park illustrates the importance of government policy to the potential biodiversity benefits of an ecotourism project. The field visit to the project found that the park faces a series of major threats that park personnel are not actively resisting, including agricultural land conversion, in-migration of people, illegal logging, and poaching (contracts to sell meat). Lack of enforcement of laws against such activities is the most serious problem faced by the

³⁵ *Tourism Highlights*, 2003, on the Web at www.world-tourism.org.

³⁶ Wood and others, 2003, p. 46.

park. Furthermore, the government is considering building a paved road through the habitat of the Honduran emerald bird, which cuts through part of the park.

148. If a government provided adequate protection of biodiversity within a protected area, there would be no need for a GEF project. Moreover, GEF should not provide support in the absence of government protection policies or practices. A minimum level of government protection should be a condition for approval of an ecotourism project that is dependent on the continued viability of a protected area.

149. The private sector investor in the ecotourism may attempt to substitute its own political will and resources for biodiversity protection for that of the government. In the case of the Pico Bonito Lodge subproject, the presence of local guards hired by an NGO generated by The Lodge in certain parts of the park has helped reduce illegal activities. The Lodge and the Foundation are also advocating that the government legally declare the full park as a protected area. Whether the admirable private sector initiative in this case will be enough to overcome problems of lack of enforcement in the park, however, remains to be seen. As a general rule, private sector willingness to try to protect biodiversity resources is not a substitute for government standards in assuring the long-term viability of the protected area.

Conclusions

150. The financial success of ecotourism operations depends on at least five major factors, listed above, which form a convenient framework for evaluating proposals for supporting such ventures. The most important of these factors is the operation's desirability as a tourist destination.

151. Unsupportive government policy toward biodiversity conservation can threaten to erode or destroy the biodiversity benefits of ecotourism, particularly if it is failing to stem major causes of deforestation in protected areas.

Recommendations

152. Prior to approval of a private sector ecotourism project, a critical minimum level of government efforts for protection should be agreed.

Payments for Environmental Services

153. Throughout Latin America, most of the globally significant biodiversity is located on privately owned land. Therefore private landowners must be given incentives to conserve biodiversity on high biodiversity lands, particularly lands surrounding existing protected areas.

154. An innovative approach to the creation of such incentives is payment for environmental services (PES). In general PES schemes aim at creating markets for currently unvalued ecological services and biodiversity conservation through contracts between those who benefit most directly from the services and the providers. Under PES schemes, private landowners are paid for environmental services generated by appropriate management of their land. In practice, payments are currently made for the following: (1) mitigation of GHG emissions through carbon storage; (2) hydrological services, including

provision of industrial uses and hydroelectric energy production; (3) biodiversity conservation; and (4) scenic beauty.

155. Payments for forest management that conserves biodiversity, though included under the rubric of PES, are clearly distinguished from other payments for environmental services by the fact that there is no real market for biodiversity in the sense of saving species and habitats for species. It is up to nations and international institutions to compensate landowners for income foregone from not converting the forests to other uses or exploiting timber resources at a maximum rate. This is quite different from supporting the creation of private reserves, which is the alternative approach to encouraging biodiversity conservation by forest landowners. The creation of private reserves, discussed below, depends on other types of incentives for private landowners to practice biodiversity conservation.

156. In the GEF portfolio, the PES approach is being implemented in the Costa Rica Ecomarkets project, implemented by the World Bank, and the GEF/IFC SME FUNDECOR Costa Rica project. As will be explained below, these two projects are separate, but have overlapped in part in the past, in that some landowners could qualify for both programs.

157. The Government of Costa Rica introduced new economic incentives to counter the tendency of landowners to cut down their forests for timber and agricultural revenues, in order to reduce deforestation and promote reforestation. Under the Ecomarkets project the GEF provided US\$8 million to the National Forestry Financing Fund (FONAFIFO), of which US\$5 million was used for direct payments for forest contracts with land owners in designated areas within the Meso-American Biodiversity Corridor, and US\$3 million was used to increase the institutional capacity of FONAFIFO and NGOs assisting farmers to access the Fund.

158. The incentives for biodiversity conservation provided by environmental payments schemes depend in part on having a strong legal-regulatory framework. Costa Rica's Forest Law No. 7575, which introduced PES scheme, provides an example of such a framework. The law establishes a clear rule that forests may only be harvested if a forestry management plan exists that complies with criteria for sustainable forestry and thus strictly forbids conversion of natural forests. The government also has dedicated specific tax revenues to the financing of the fund that will pay landowners for these services.

159. Regulatory limits on harvesting timber are not enough in themselves to protect biodiversity, however, because of the potential for converting the land to other uses, such as pasture or agricultural production, and because of the likelihood of incomplete enforcement of the law. The Ecomarkets project pays landowners under Forestry Environmental Services Payment Program (FESP) contracts for forest conservation, sustainable forest management, and reforestation; the payments are based on the amount required to deter such conversion of forest land. The largest category of contracts (85 percent of the total area affected by FESP contracts) is Forest Conservation Easements, which provides payments to landowners to allow natural forests to regenerate without logging.

160. The GEF/IFC SME program represents another application of the approach of direct payments to landowners for forest management that protects biodiversity. The program has lent US\$500,000 to the FUNDECOR Costa Rica subproject to make advance payments to landowners for wood

harvested in forests and plantations that have been certified under the Green Seal program, based on the Forest Stewardship Council (FSC) criteria.

161. The arrangements for repayment depend on whether the timber purchased is from tree plantations or natural forest. Plantation owners agree to sell to FUNDECOR a specific volume of timber in exchange for fixed annual payments. Advance payments for tree plantations are repaid only when the first harvest occurs. So far the subproject has provided advance purchase payments for wood from 31 established plantations and for first harvests from 32 natural forests.

162. By making selective logging more profitable, the FUNDECOR sustainable forestry subproject is designed to provide another incentive for owners of secondary forests and plantations to manage them sustainably and thus may provide biodiversity benefits if implemented rigorously. The program is focused on the Central Volcanic Range Conservation Area, and has signed up 80 percent of all the possible landowners who could participate, indicating that the incentive is very attractive to the landowners.

Potential Biodiversity Conservation Benefits

163. The extent to which GEF support for payments for environmental services will contribute to increased biodiversity conservation depends on whether the incentives provided are appropriately targeted and are based on adequate systems of monitoring and enforcement. Targeting can take place at both the geographical level and within a particular area in terms of the biodiversity value of each individual land parcel. Conservation easements or similar contracts should discriminate among forested lands, based on objective criteria of species richness, endemism, and the relationship of the parcel to other forest land of high biodiversity value. Ideally, both levels of targeting should be used to maximize biodiversity conservations per unit of compensation.

164. The GEF project payments are focused on higher biodiversity forest lands through geographical targeting introduced by the GEF. GEF targeting supports payments to Costa Rican landowners only within priority areas of the Meso-American Corridor (MBC), which is of global biodiversity importance. One-third of the GEF funds are dedicated to priority biodiversity corridors, including the Tortuguero Biological Corridor, the Barbilla Biological Corridor, the Corcovado-Piedras Blancas Biological Corridor, and the Fila Costena Biological Corridor, and another third to primary and mature secondary forests outside the priority biodiversity areas. The purpose of the project is thus to support a progressive shift away from the earlier scattered approach to ESP contracting used prior to the GEF intervention to a focus on conservation and consolidation of priority Costa Rican MBC sites.

165. In the case of the Costa Rican system of environmental payments, direct payments to landowners are based on a flat fee per hectare, without distinguishing forests with more biodiversity from forests with less biodiversity. It would be desirable for a direct payment scheme to vary depending on the biodiversity value of the land. Introducing further selectivity into the payments system, however, would require a much more highly developed system of data collection and analysis on the forest lands than now exists.

166. Supporting the establishment of wood plantations under a PES scheme raises a broader policy issue for GEF. Paying landowners to grow monoculture wood plantations involves very little if any biodiversity benefit, even though plantations can be certified under FSC criteria. Monoculture plantations are not biologically sustainable, since they strip the soil of essential ingredients and increase the risk of heavy loss of topsoil. They are more prone to plague and pest infestation, droughts, and fires.

167. The argument for supporting monoculture plantations in the project is that it is better than seeing the land be converted to pasture land. However, even if the land is already highly degraded land with very little biodiversity value, almost no biodiversity benefits result from converting such plantations. In such cases the land-use pattern, whether for wood, cattle, or agricultural produce, should be determined by the markets rather than by government subsidies. If, on the other hand, the land represents natural forest, conversion would clearly represent a loss of biodiversity and should not be supported by GEF. There is danger that financial incentives for establishment of plantations could result in increased illegal conversion of natural forests, even though such conversion would violate Costa Rican regulations. This danger is demonstrated by the experience of incentives for establishment of plantations in Indonesia.

168. To understand how well the existing payment schedules in the PES scheme and the advance wood purchase program have worked in conserving biodiversity, GEF would need to undertake a relatively detailed study of the biodiversity value of a sample of those forests included in each of the two programs, and compare the sample with forests in the same geographical areas that remained outside the program. Such an evaluative study is needed to determine the extent to which the two Costa Rican models can be used elsewhere without major revisions in the respective schemes.

169. FUNDECOR claims credit for a lowering of the gross deforestation rate in those areas where it is has the most landowners under contract.³⁷ Gross deforestation rates are not necessarily indicative of gains in biodiversity conservation, however. These data reflect the increased establishment of monoculture plantations, rather than an actual decrease in the loss of natural forests. They are not evidence of success in increased protection of biodiversity.

170. As an approach to conservation easements, the PES scheme used in Costa Rica, with the five year contracts that can be renewed, is of relatively short duration. There is a significant risk that some landowners will cut down their forests when the first contract ends, if land prices escalate or opportunity costs rise because agriculture or livestock become more profitable. Twenty-year contracts are also available, but demand is slight because of the availability of the much shorter alternative.

171. This risk of complete loss of biodiversity benefits from the investment at the end of the contract can only be reduced by continually revising the incentives structure to maintain its competitiveness with other land uses, and by establishing a fund, primarily from international sources, which has sufficient

³⁷ FUNDECOR, 2003, "Bringing Forest to the Mainstream Economy—institutional frameworks and economic instruments to reduce deforestation: Costa Rica 1991–2001 FUNDECOR," pp. 18–24, on the Web at http://www.katoombagroup.com/Katoomba/meetings/ppt/Switzerland_2003/Shows/Franz%20Tattenbach%20%5BRoad-Only%5D.pdf.

resources to extend the necessary incentives farther into the future. Shifting to twenty-year or thirty-year conservation contracts would be a much better strategy for ensuring against the loss of biodiversity benefits during that period, even though the cost per hectare would obviously rise. A related strategy for avoiding the loss of the highest value biodiversity on private land would be to use a combination of economic and legal tools to convert that land to a public protected area, as has been done in Brazil (see Section D below).

172. Another policy issue raised by the use of direct payments to forest landowners is whether these payments should cover sustainable logging on primary or old-growth forests. GEF has focused one-third of the payments on these forests, which have the greatest biodiversity value. Because landowners are able to obtain certification based on FSC criteria, which do not prohibit logging in primary forces, primary forests that are being logged are eligible for Greenseal certification and therefore for contracts for sustainable management. The field research report on the FUNDECOR sustainable forestry subproject describes a visit to a 300-hectare sustainable forest management site consisting mostly of primary forests, on which logging was being carried out, with technical assistance from FUNDECOR to ensure that was sustainable. The SME program coordinator confirmed that the advanced payments for timber can be made to owners of primary forests that achieve Greenseal certification.³⁸

173. For GEF, however, support for PES schemes that include payments for sustainable logging on primary forests raises a different policy issue from that covered in World Bank forest policy. PES is supposed to offer appropriate incentives for both conservation and sustainable forest management. The incentive for conservation contracts obviously must be greater than for a sustainable management contract, in order to reflect the opportunity costs of not extracting timber from the forest. The logical implication is that these incentives should operate so that they result in primary forests being covered by conservation contracts, while secondary forests are covered by sustainable management contracts. If owners of primary forests have a choice between conservation contracts and sustainable logging contracts and are choosing the latter, then the purpose of the incentives for conservation contracts is being defeated. The GEF clearly values the preservation of the biodiversity on primary forest land highly enough to offer higher payments for conservation contracts over sustainable logging contracts. Therefore, it should be either make the incentive payment for forest conservation high enough to induce landowners to choose that option over sustainable contracts, or it should not make the latter option available to primary forest owners.

³⁸ The cutting of primary forests is not inconsistent with the World Bank's forest policy. At the time the IFC sustainable forest management subprojects were approved, the World Bank had a forest policy under which it was forbidden from financing commercial logging operations or the purchase of logging equipment for use in primary tropical moist forest. However, neither the World Bank support for the project nor the FUNDECOR SME subproject financed commercial logging. They only made logging primary forests more attractive to the land owner. See Operational Policy since November 2002. Since November 2002, World Bank policy has been that that it may finance commercial harvest operations only if it determines that the areas affected are not critical forests and that they are certified under an independent certification system that meets standards of responsible forest management and use. Operational Policies: Forestry (OP 4/36), *The World Bank Operational Manual*, September 1993.

Conclusions

174. Direct payments to landowners, as employed in the PES concept, are an innovative approach that may be particularly important to conserving biodiversity outside protected areas, especially if large areas of forested land in the country are privately owned.

175. The biodiversity benefits of payments for “reforestation”—that is, establishing monoculture plantations and giving advance payments for the wood harvested—appear questionable, regardless of how much biodiversity value the land converted to such plantations may have had. Even if the system of payments prohibits conversion of natural forests on paper, such incentives are at risk from conversion through covert and illicit means.

176. Incentives for sustainable logging in primary forests through certification, as are provided in the Costa Rica Ecomarkets project and FUNDECOR, conflict with the more important GEF objective of providing incentives for owners of primary forest to sign conservation agreements. Some primary forest owners are choosing sustainable management contracts, which indicates that the present system of incentives is not working as it should.

177. The risk that short-term conservation easement contracts will simply be followed by cutting down the forests is relatively high, unless the contracts are accompanied by a combination of plans for establishing a fund to cover long-term easements and plans for using both economic and legal tools to convert the biologically most important lands to public protected areas.

178. The number of biodiversity policy issues that arose in connection with both the incentive and PES payment schemes suggests that payments are a particularly policy-heavy approach to private sector engagement in biodiversity, which requires significant conservation policy capacity in order to design and supervise.

Recommendations

179. GEF should conduct a careful assessment of the impact of the Costa Rica Ecomarkets project on biodiversity conservation. At the same time, GEF should continue to look for additional opportunities to support systems of payments to landowners for biodiversity conservation as an approach to biodiversity conservation in countries where forests with high biodiversity values are privately owned.

180. GEF should adopt a policy of not supporting government incentive payments to landowners to establish monoculture wood plantations.

181. GEF should adopt a policy of not supporting direct payment incentive schemes for biodiversity conservation that encourages sustainable logging on old-growth or primary forests, because it would be in conflict with the more important objective of providing incentives for conservation of such forests. GEF policy on such projects should make clear that incentives for conservation should take priority over incentives for sustainable logging on primary forests.

182. In any projects involving direct payments to landowners, GEF should put major emphasis on efforts to ensure the long-term protection of biodiversity by offering long-term easement contracts, and by establishing trust funds for support of such long-term contracts.

Private Lands Conservation in Latin America

183. Another approach to engaging the private sector in biodiversity conservation is to encourage the creation of private protected areas or reserves by special legal arrangements and economic or fiscal incentives. If successfully implemented, such “private lands conservation” programs can help conserve biodiversity in public protected areas by protecting buffer zones and linking protected areas through conservation corridors.

184. Formal private lands conservation arrangements have taken the form of voluntary agreements between landowners and the government to designate private lands as a “private reserve” or “private protected area” on the basis of its conservation value. These arrangements have required a management plan and period reports on their implementation. As of 1991, 11 Latin American countries had some formal system of private reserves or protected areas, and the number of individual agreements ranging from a handful in several countries to 559 in Brazil. These systems vary tremendously in what is required of the landowner as well as in the kind of economic or fiscal incentives offered. The private land conservation systems in Brazil, Costa Rica, and Ecuador have been operating for some years, whereas those in other countries are much newer. Mexico has no official system or program for private reserves or protected areas.

185. GEF biodiversity projects involving support for private land conservation represent the largest single group of projects engaging the private sector in biodiversity conservation. This cluster of projects includes the Mexico Private Land Conservation Mechanisms project; the Grenada Dry Forest Conservation Project; the Establishment of Private Nature Heritage Reserves in the Brazilian Cerrado project; and the Chile Valdivian Forest Zone Public-Private Mechanisms project.

186. The GEF has employed three main types of interventions to support the objective of increased and more effective private lands conservation, especially increases in the use of private reserves:

- (1) assistance in awareness raising, training, and technical assistance for promoting private protected areas and more effective management of existing areas;
- (2) support for ecotourism operations on the reserves as a further incentive for establishing such entities; and
- (3) assistance in introducing appropriate legal and political frameworks for incentives to conservation on private lands.

Major Obstacles to Creation of Successful Private Reserves

187. Although private land conservation schemes are an obvious response to the need to extend biodiversity protection to privately owned lands, they face major obstacles to success. The most

important obstacles are the lack of the requisite legal frameworks and adequate government incentives. In Latin America, the legal and economic frameworks for private land conservation vary widely and in many cases are so weak that private protected areas or reserves do not yet provide any real protection for biodiversity. In the four projects referred to above, the GEF is still achieving a basic understanding of what kinds of legal frameworks and economic incentives are required to achieve effective biodiversity protection on private lands, given the variety of socioeconomic systems and types of land.

188. The legal status of private reserves differs from country to country. In Brazil and Ecuador, designation as a private reserve is perpetual and binding on all future landowners, but in Costa Rica and Peru, such reserves are designated only for limited terms of up to 20 years and are terminated if the ownership of the property changes.³⁹ Chile has a system of “private protected areas” (PPAs), but the legal framework provides no guarantee that they will not be sold to another landowner who will eliminate the conservation objectives, and they may be dismantled at the landowner’s discretion.⁴⁰ The existing legal framework may not be adequate to support a viable system of private protected areas.

189. Another serious obstacle is that countries with private reserves have not provided any real fiscal or other incentives for reserve creation and implementation. A few countries offered exemption from government property taxes as well as credit and grant resources for conservation-related actions in return for declaring and implementing private reserves. But rural property taxes in Latin America have always been very low and poorly enforced, so these exemptions represent very weak incentives for landowners to create and abide by private reserve agreements. Furthermore, even these modest exemptions have been withdrawn in Ecuador, Guatemala, and Bolivia in response to fiscal crises in those countries.⁴¹

190. A critical question facing GEF efforts to support private land conservation efforts in Latin America is what kind of incentives are required to induce private landowners to voluntarily manage their land so as to conserve biodiversity. Each of the four GEF projects dealing with private land conservation has addressed that question in a different way.

191. The adequacy of existing government incentives for private reserves in Brazil has been directly addressed by The Brazil Cerrado Private Natural Heritage Reserves project. This project aims at the establishment of four fully functioning private reserves, the creation of a private reserve network, and sharing of the lessons learned from the four reserves with other landowners. Brazil’s system of Private Natural Heritage Reserves (RPPNs in Portuguese) requires the designation of land for conservation in perpetuity, which puts it at the high end of opportunity costs imposed on landowners. In return Brazil offers landowners the incentives of exemption from the Rural Property Tax and priority

³⁹ Byron Swift with Susan Bass, 2003, *Legal Tools and Incentives for Private Lands Conservation in Latin America: Building Models for Success*, Washington, D.C.: Environmental Law Institute, p. 18.

⁴⁰ Elisa Corcuera, Claudia Sepúlveda, and Guillermo Geisse, 2002, “Conserving Land Privately: Spontaneous Markets for Land Conservation in Chile,” in Stefano Pagiola, Joshua Bishop, and Natasha Landell-Mills, eds., *Selling Forest Environmental Services*, London: Earthscan, pp. 140–141.

⁴¹ Swift and Bass, 2003, p. 37.

treatment for agricultural credit from the National Environment Fund and national credit institutions. The project recognized from the beginning, however, that the additional income derived by the landowners from these fiscal and credit incentives would be not be a sufficient.

192. In order to compensate for the inadequacy of the existing incentives for creation of RPPNs, the Brazil Cerrado project also provides investment grants to a number of model reserves to enable testing of innovative business models for ecotourism. However, the experience of the project does not provide a very clear test of the effectiveness of financial and technical assistance to ecotourism as an incentive to designate private lands in perpetuity for conservation. The major consideration for landowners in the vicinity of the Chapada dos Veadeiros National Park was not the opportunity for ecotourism but the decree of September 2001 expanding the Park by nearly four times its previous size, the vast bulk of which came from privately owned land. Significantly, those landowners who had agreed to turn their land into RPPNs were excluded from this expansion of the park, and the message to other landowners both in the expansion and outside it was clear: if you wish to hold on to your land, it is advantageous to convert it into an RPPN. After legal challenges by the landowners, the Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute of Environment and Renewable Natural Resources, IBAMA) agreed to review the limits of the expansion, thus establishing a strong bargaining position with the landowners.⁴²

193. Even with that powerful incentive for offering private lands around the park as RPPNs, the Brazil Cerrado project reported that only eight landowners have asked for recognition of their properties as RPPNs. Five of the requests were presumably “opportunistic,” because they were influenced by the desire to avoid being confiscated for inclusion in the National Park.⁴³ Without the threat of confiscation of land, it is not clear how many landowners would have been willing to volunteer to designate their land as RPPNS.

194. The Chile Valdivian Forest Zone Private-Public Mechanisms for Biodiversity Conservation project seeks to promote the formation of new PPAs on priority sites, as well as to strengthen the management of existing PPAs. The legal framework for PPAs in Chile when implementation of the project began in 2001, however, provided no fiscal or economic incentives specifically for PPAs. Although Chile’s General Environmental Law of 1994 included an article that called for creation of an administration and a system of tax deductions for PPAs, it had such low priority that it has not actually been implemented.⁴⁴

195. Chilean law is at the other end of the spectrum from Brazil in regard to legal requirements for a PPA status. The staff of the project implementation team observed in 2002 that there was no accepted definition of what PPA status actually means, and that it is “a verbal statement of good intentions by the landowners involved.” As a result conservation practices in Chile “vary greatly in efficiency and

⁴² GEF, 2003, PIR Report on Establishment of Private Natural Heritage Reserves in the Brazilian Cerrado, July 15.

⁴³ GEF, 2003, PIR Report.

⁴⁴ Corcuera, Sepúlveda, and Geisse, 2003, pp. 128–129.

results.”⁴⁵ Thus the project was trying to promote the formation and implementation of PPAs without either adequate legal requirements or economic incentives. It had to rely primarily on the provision of awards for outstanding private sector efforts to conserve the Valdivian forest ecosystem—that is, social recognition—as an incentive for accepting PPA status. Furthermore, agreements with landowners on such PPAs were only for three years.

196. A test is needed of whether such noneconomic incentives can motivate landowners to create and maintain effective PPAs. Unfortunately, the draft Implementation Completion Report of the project does not indicate whether effectiveness has been assessed in any systematic way, and no data on the actual results in terms of different types of PPAs (extractive and nonextractive) is included. However, the emphasis of the report on the importance of monetary incentives strongly implies that nonmonetary incentives are insufficient to induce landowners to actually carry out any meaningful conservation activities, even for the brief three-year period of the arrangement.⁴⁶ The definition of PPAs also was broad enough to cover land on which extractive activities, such as logging, is continuing, thus reducing significantly the biodiversity value of such a designation.

197. Other contributions of the Chile Valdivian Forest Zone project were Steering Committee recommendations in 2002–2003 of public agencies and nongovernmental institutions, including representatives of private landowners, for the reform of the law governing the establishment of PPAs. Most of the Steering Committee’s recommendations were incorporated into a new decree on procedures for PPAs issued by the president of Chile in June 2003. One of those recommendations was that planning requirements for PPAs should be differentiated by category of land use, and that management plans should be required only where the PPAs involve consumptive uses, such as timber harvesting.⁴⁷

198. With regard to economic incentives for landowners to create and maintain biodiversity conservation, the Steering Committee recommended compensating landowners for the specific costs of creation and management of PPAs, rather than providing rural land tax credits. This recommendation was not incorporated into the new decree on PPAs, however. The government has indicated that it will include in the Law on Restoration of Native Forests a provision for payments for specific conservation activities in PPAs. But the cost of a management plan and environmental impact assessment for those PPAs in which consumptive uses of the land takes place, which averages \$7,000 for a 1,000 hectare PPA, is considered too high for landowners to pay in the absence of financial assistance from the government. The incentives proposed by the project in the form of compensation for all costs of establishing and maintaining the PPA will not be tested any time soon in Chile.

199. The Grenada Dry Forest Biodiversity Conservation project, in addition to raising awareness of the importance of dry forest habitats, is supposed to identify ways to provide economic incentives to

⁴⁵ Corcuera, Sepúlveda, and Geisse, 2003, p. 130. The authors are on the staff of the Center for Environmental Investigation and Planning (CIPMA in Spanish), the NGO that is implementing the project in Chile.

⁴⁶ GEF, 2003a, Draft Implementation Completion Report, Valdivian Forest Zone Project, December 30, pp. 13–14.

⁴⁷ GEF, 2003a, p. 14.

private landowners for conserving biodiversity on their lands, based on consultations with the landowners themselves. The project is 16–18 months behind schedule and therefore has not made any progress on that component.

200. A more ambitious effort to promote private reserves in a country which has not had a legal framework supporting such arrangements is the Mexico Private Land Mechanisms for Biodiversity Conservation project. Mexico is at the very beginning of the process of developing a private lands system. Unlike other Latin American governments, Mexico has no government program to designate private lands as reserves and no specific legal framework for biodiversity conservation on private lands at the federal level, although the State of Vera Cruz has a provision for conservation easements as a legal tool for private lands conservation. Furthermore, no financial incentive for establishment of private reserves is now offered by the federal or state governments.

201. The Mexico Private Land project, which is being carried out by a leading Mexican NGO, Pronatura, explicitly recognized the need for both a new legal basis for private reserves and new economic incentives and has sought changes in the legal and policy frameworks at both state and federal level in support of private land conservation. Thus the project has succeeded in getting four state governments to modify their laws to comply with the model legislation on private lands conservation drafted by Pronatura. The Mexico Private Land project is still working on reform of federal law.

202. Pronatura has also created a “toolkit” for negotiating private but enforceable agreements between NGOs and landowners for managing the land, thereby conserving certain conservation values in five pilot sites, one of which has only privately owned lands. The toolkit includes 16 different possible legal arrangements, most of which are variants of conservation easement agreements between among landowners and Pronatura, in which the state is not involved except for legal enforcement. Pronatura has applied that toolkit in negotiating conservation agreements with nine landowners at the site, whose lands total 770 hectares. Pronatura does offer any cash payments to the landowners under these agreements. However, in return for various commitments to a management plan limiting land use and other conservation actions, Pronatura offers landowners benefits ranging from legal help in ensuring that the land cannot be taken over by the government for any purpose, to technical assistance for an ecotourism venture.

203. The number of such agreements with private landowners is still quite small, and Pronatura is still studying the results of the agreements in terms of conservation, so it is too early to have an assessment of how much difference such conservation easement agreements involving incentives short of cash payments can make on different kinds of lands. However, the model developed in the Mexico Private Lands Mechanisms project of a national-level NGO negotiating private conservation easements with individual landowners, using a range of landowner interests rather than cash payments, is worth study as an alternative to government-based efforts at private land conservation. The integrity and commitment provided by the central role played by an NGO are obviously important assets in ensuring that conservation interests are not sacrificed in the development of a program on private lands.

Conclusions

204. Inadequate or nonexistent legal and policy frameworks are a significant obstacle to efforts to achieve conservation on privately owned lands in Latin America, particularly in regard to PPA systems requiring government registration and monitoring.

205. No GEF project on private land conservation has yet produced results that can be cited as the basis for making it a successful model to be replicated. However, the Mexico Private Land Mechanisms for Biodiversity Conservation project may provide such a model, which would be a clear alternative, moreover, to government-based programs in other Latin American countries.

Recommendation

206. GEF should study the lessons learned from the Mexico Private Land Mechanisms for Biodiversity Conservation project and, if the conservation benefits appear to be substantial enough, seriously investigate the possibility of using it as a model for future projects for private land conservation elsewhere in Latin America.

VI. CROSSCUTTING ISSUES

GEF Procedures and the Pace of Implementation

207. GEF projects with private sector engagement, like other GEF projects, have been slow to develop. Data collected for the 2003 Project Implementation Review (PIR) show that average elapsed time for both private and public sector projects between GEF Council and IA approvals has improved but is considerable. For the World Bank, average elapsed time between GEF Council approval and effectiveness for all full-size projects, including both private and public sector projects, was 795 days in 2003. Elapsed time for all UNDP projects from Council approval to implementation was 370 days.

208. GEF has devised a simplified approval process for regional or global umbrella projects like the GEF/IFC SME Program. For these projects the Council has approved an overall programmatic approach without approving each subproject. Similarly, a focal point no-objection procedure has been used under which the operational focal point is informed about a subproject in a country and must respond by a certain date if the government has objections. Nevertheless, these umbrella projects are also maturing slowly due to complexities faced by IFC in initiating the subprojects or securing private sector investment funds.

209. In addition to the slow start, projects frequently fall behind schedule during implementation. Added to that, a few projects have also been closed down or restructured due to unsatisfactory performance. Delays in beginning implementation not only affect project impacts, but may also raise audit and project costs, requiring budget reallocation or causing budget overruns. The slow maturing of the portfolio has prevented the review team in many cases from drawing firm conclusions.

210. In any case, slow implementation of the GEF portfolio should be considered seriously. It seems to the review team that delays occur at all stages of the projects (development, preparation,

implementation) and may be the result of unclear policy, poor design, unrealistic timetable, lack of understanding of the issues, and lack of supervision. GEF should make a thorough study of impediments to implementation progress.

Assessment of GEF's Policy

211. The GEF private sector portfolio evolved from the early days of the pilot phase, without specific policies or guidelines. GEF Council support for this engagement was nascent in the mid-nineties, but fast growing towards the end of the decade. The 1996 Council paper⁴⁸ laid down some essential principles, but did not clarify the objective of GEF's engagement, the scope of cooperation in various focal areas and subsectors, or the extent to which GEF's objectives converge with those of the private sector. The 1999 paper⁴⁹ focused particularly on exploring new modalities of nongrant financing.

212. Both papers are more suggestive than systematic in laying out objectives, strategies, and guidelines. GEF policy is not very clear on the overall objective of its private sector engagement relative to cooperation with and support of the public sector. The rationale and objectives for engagement in various focal areas or sectors also need further elaboration.

213. More generally, various key principles as they appear within GEF's policy (such as sustainability, leveraging, innovation, and replication potential) need to be better understood and defined, particularly in terms of their relative importance during a project's design phase, and for supervision and monitoring of results. It is particularly important to better define GEF's role in the context of replication (by whom?) and sustainability. One new modality proposed in the 1999 paper—long-term direct partnerships—has not been followed through in the GEF. Another modality—bankable feasibility study—has been used in one case.

Risk Sharing

214. The 1999 GEF Council paper on the private sector directed the GEF was to avoid situations in which it was subject to taking all the risks with regard to contingent loans and grants. The paper states:

To avoid inducing project failure to “collect” a grant, contingent loans and contingent grants must be carefully structured to include risk-sharing arrangements. Project sponsors should cover conventional commercial and other baseline costs, while the GEF concentrates on incremental costs of achieving global environmental benefits.⁵⁰

215. The Council document suggests a number of financing mechanisms to achieve more risk sharing, including contingent grants, contingent loans and partial risk guarantees, and arrangements for reflows of funds to return to the GEF in cases where the guarantee does not become effective. However, these mechanisms have not been adequately operationalized and implemented. There are few provisions for

⁴⁸ GEF, 1996, “GEF Strategy for Engaging the Private Sector,” GEF/C.7/12, April.

⁴⁹ GEF, 1999, “Engaging the Private Sector in GEF Activities,” GEF/C.13/Inf.5, May.

⁵⁰ GEF, 1999.

risk sharing between partners, a practice that is very important to avoid moral hazards of partners making use of GEF funds. In the World Bank Group's energy efficiency portfolio it seems that GEF is increasingly bearing risks that are not incremental to the project, such as corporate credit and macroeconomic and political factors.⁵¹ GEF is very often liable to the first and only loss. In those cases, GEF's contribution has functioned as a "soft budget constraint" and has not provided sufficient incentives to motivate cooperating partners.

216. Furthermore, GEF does not even have the information and the tools to implement its policy in this respect. It has not yet entered into contractual arrangements with the implementing agencies and other partners in regard to risk sharing in any project. Meanwhile, contracts between the implementing agencies and their partners are not shared with the GEF Secretariat. Nor does the GEF have the accounting tools to handle reflows to which it could be entitled.

Host Country Participation

217. The projects and subprojects visited for this review were, with one exception, regarded by the host countries as consistent with their priorities. However, even the host government's explicit approval for a project does not ensure that the project is of high priority and will be adequately supported by government policies. Renewable energy was not a high country priority of Honduras or Uganda, for example, and the lack of concrete support for the project made it more difficult to create a market for solar PV, given the other specific difficulties with this type of project.

218. It has proved to be difficult to implement private sector engagement projects in countries where host government policies and regulations have a direct and negative impact on the private ventures. Such policies include subsidies to conventional energy alternatives, import duties on solar PV equipment, or grid extension plans, which undercut GEF off-grid project plans. However, if private sector engagement can influence the host country to provide a more supportive environment, the chances for success of a project will be increased, even if host government priorities or policies are initially at odds with it. However, the costs can be substantial. It does not make sense, in most cases, for GEF to support a project which is not completely in line with the government's priorities.

219. Strong supportive policies by the host country government are paramount to projects aimed at market transformation to energy-efficient products and processes through the establishment of national standards, labels, and certification processes. These actions require the public sector taking the lead, in close relationship with the private sector stakeholders.

⁵¹ World Bank, 2004, "World Bank GEF Energy Efficiency Portfolio Review and Practicioners Handbook," January 21, p. 24. On the Web at <http://lnweb18.worldbank.org/essd/envext.nsf/46ByDocName/KeyThemesMitigationWorldBankGEFEnergyEfficiencyPortfolioReviewandPracticioners'Handbook>.

GEF Secretariat Role and Capacities for Dealing with Private Sector Engagement

220. Until recently the Secretariat had no staff expertise in analysis of relevant risks and in business financing structures and instruments. Moreover, insufficient staff time and attention has been devoted to drafting private sector policies, strategies, and programs. The GEF Secretariat is by no means set up to operate a number of financial mechanisms, like partial risk guarantees and contingent loans, that are built on the shared risk principle (*pari passu*) and include arrangements for potential re-flows to the GEF Trust Fund. Although such arrangements may add to the complexity of project deals, they may be necessary to provide better incentives and avoidance of moral hazards for the GEF Secretariat's cooperating partners.

221. The GEF Secretariat has not engaged significantly the private sector in dialogues about potential areas of cooperation.

Implementing Agency Roles and Capacities

222. The initial distribution of roles for the three GEF Implementing Agencies, as set out in the GEF Instrument, was that the World Bank (including IFC) would be principally engaged in investment activities, UNDP would work in capacity building, and UNEP would specialize in science and technology matters as well as global, regional, and national assessments. The two UN agencies have more commonly used grants in their engagements, while the World Bank and IFC have more frequently used financial modalities.

223. Over time, however, these IA roles have been blurred. In most of their projects, the World Bank and IFC also make use of technical assistance for capacity building, whereas the two UN agencies have used contingent financing modalities. Given the diversity of private and public sector actors and variety of contexts, it seems appropriate for the implementing agencies to maintain some flexibility in regard to the types of GEF projects they implement.

224. It would seem that the World Bank's strength in the context of GEF private sector engagement would be to relate GEF projects to the Bank's macroeconomic and sector assessment work, as well as its relevant sector strategies, especially energy, agriculture, and forestry. The World Bank's focal area policies on biodiversity and energy have also provided important links for GEF projects to broader country frameworks. The linkages of GEF programs to the Bank's broader public policy dialogue is also important.

225. IFC's advantage to GEF is its specific mandate and long experience in working with private sector partners and the use of a variety of financial modalities. Closer cooperation between the World Bank and IFC's engagements would be advantageous, particularly on macroeconomic analyses and public policy, as well as identification and cooperation with local ESCOs, local financial institutions, and other partners. Compared to the other agencies, IFC is more oriented towards investments that will yield commercial internal rates of return in the near to medium term. Some commercial projects that may be interesting from a GEF perspective may not satisfy IFC's requirements. It is not clear that IFC has a comparative advantage in market transformation projects, which are mostly based on grant financing

and technical assistance for the development of environmental codes, standards, and labeling for efficient lights, refrigerators, motors, and buildings.⁵² Contrary to expectations, the review concluded that IFC is not always playing a complementary role to the World Bank. Sometimes IFC competes with the World Bank for GEF resources. Relative to the other agencies, IFC is more likely to direct its attention towards better-functioning market economies among the middle- and high-income group of developing countries, and towards countries with economies in transition.

226. UNDP's strength lies in its wide country presence and its long experience on capacity building projects. UNDP has had a comparative advantage to carry out market transformation projects, which has entailed cooperation especially with the public sector in developing standards, codes, and labels for energy-efficient products and processes, like refrigerators, lights, buildings, and motors. One of the drawbacks for the organization has been its relatively short experience of working with the private sector. In some UNDP projects, there has frequently been an absence of attention to the potential for economic viability and the private sector has been crowded out.

227. UNEP's specialty is in science and research. Recently, it has developed network for private sector financing. UNEP is the only IA to have demonstrated the potential of "Bankable Feasibility Studies," a modality called for in the 1999 Council paper on GEF private sector engagement policy. The experience with this modality has not been thoroughly reviewed yet.

228. UNEP and UNDP have both undertaken GEF projects involving contingent financing tools such as risk guarantees, despite the weak institutional capacity for designing and implementing these tools. Both IAs will need to reinforce their capacities for contingent financing if they are to continue to implement projects involving such mechanisms. All three IAs have stated that they will cooperate to make an assessment of enhanced risk management modalities.

Monitoring and Evaluation

229. Most projects in the private sector engagement portfolio, and particularly the older projects, lack an adequate framework for measuring market effects and especially environmental impacts.

230. The 2002 GEF M&E PPR noted a broader pattern of weaknesses in monitoring and evaluation (M&E) systems in all kinds of projects, including missing or inadequate baseline data, the absence of indicators, and a tendency to focus on inputs and outputs rather than on progress toward the project objectives. In biodiversity, few attempts have been made to document the baseline status of biodiversity in regard to either species or ecosystem functions, which makes measuring the impact of the project at the end of implementation difficult.

231. For example, the Pico Bonito subproject has carried out some biodiversity baseline studies of biodiversity in the park and buffer zones at the species level. In the absence of any baseline data, however, it will be impossible to reach any valid conclusion about the difference that the project has

⁵² World Bank, 2004, p. 7.

made in regard to species and ecosystem conservation in the area. In the case of the ecotourism operations in Guatemala supported through FCG, one of the conditions of approval of the subprojects was that each individual ecologue must provide details regarding the link between their operations and biodiversity conservation. However, these subprojects still lack the tools to demonstrate such a link in the future.

232. This problem is in part the result of the fact that, when the IFC SME program was approved in the mid-1990s, the GEF did not require a well-defined M&E framework for assessing impacts on biodiversity and climate. Such a framework was made a requirement by the Council document on the GEF Project Cycle in November 2000 (GEF/C.16/Inf.7). IFC is now working on such an M&E framework for the Environmental Business Finance Program (EBFP) program. Similarly, in a number of renewable energy projects, M&E components have not yet been put in place to measure reductions in GHG emissions achieved by the GEF project in relation to the baseline scenario.

233. Projects involving private sector engagement sometimes have financial performance criteria as triggers for disbursement of concessional financing. Specifically, “risk compensation” is provided in the GEF/IFC SME program for early repayment of loans or successful completion. This program is in the process of designing a framework that combines financial and environmental performance “contingency triggers.” Such an approach could be a means to increasing the incentive for achieving environmental objectives in private sector engagement projects. However, the incentive will not work unless the M&E system used for SME projects is sufficiently robust to permit project staff to verify that environmental goals have been fulfilled.

Cofinancing and Leveraging

234. The review team tried to gather data on cofinancing and leveraging of private sector financial risk in GEF projects with a private sector engagement component. The team found, however, that the GEF system of collecting and reporting financial data provides relatively little insight into the latter issue. Many GEF Project Documents and the GEF project database treat project cofinancing and leveraging of private sector investment in project-related activities as indistinguishable by tracking what is called “private sector cofinancing” in GEF projects. The review team finds, however, that these two questions are in fact quite distinct. Cofinancing consists of financing for specific costs of the project for which the project proponents already have commitments when the project is approved. Beyond the costs of the project itself, however, the private sector may be expected to make investments for the objectives associated with the project at later stages. Such private sector investment, whether in the form of additional lending by FIs beyond what is financed directly by the project, equity investment, or capital purchases of energy-efficient products, can be considered to have been “leveraged” by the project, but are not “cofinancing” of the project.

235. The 60 projects found to have a private sector engagement component had GEF funding totaling nearly US\$600 million, whereas the cofinancing by IAs, financial institutions, and the private sector was more than US\$2.1 billion, creating a ratio of 3.7 in cofinancing (see Table 2 in the Annex).

236. It is clear that private sector institutions only contribute a minor part of the cofunding. A search in the GEF database on the 60 projects, showed that only 22 projects had identified planned cofinancing by the private sector. It is not certain that the database is entirely correct on this. There may be more private sector cofunding that is registered under another rubric.

237. Upon more careful examination of the project documents for these 22 projects, 2 were eliminated from this list because the project document did not differentiate between public and private cofinancing amounts,⁵³ or because the funding organization turned out to be a public sector agency that was only beginning the process of transition to private sector status.⁵⁴ Thus only 20 projects remained in which a clear expectation of private sector cofinancing was stated in the project document.

238. The total expected private sector investment in the 20 projects was US\$391,158 million (see Table 1 below). The expected private sector contribution was larger than the GEF funding in only 11 projects. All of the 11 projects are in the climate change focal area. Four are implemented by the World Bank, 3 by IFC and 3 by UNDP. Nearly 90 percent of the private sector cofunding is related to only 8 projects

239. It should not be surprising that most of the biodiversity projects expected little or no private sector investment. Except for ecotourism subprojects, the approaches taken in engaging the private sector in most of the biodiversity-related GEF-funded initiatives do not involve the assumption of new financial risk by the participating private landowners. These approaches involve efforts to induce those landowners either to forego certain activities or to make certain changes in cultivation practices rather than to make capital investments.

240. The limitations of these statistics must be emphasized. They are based on the private sector investments associated with the projects at project approval. It is only at project closure that the actual cofunding can be verified. In many cases, moreover, the estimates in the Project Document covered a very wide range, and in those cases, the lowest end of the range was used in the database. The estimates for anticipated funding under the Efficient Lighting Initiative (ELI) at the time of approval by the GEF in the year 2000, for example, ranged from US\$30 million to US\$80 million. These are undoubtedly the best estimates that could be made, but at best are indications of the order of magnitude.

241. Very little meaningful data on actual—as distinct from anticipated—leveraging of private sector financing by GEF projects could be obtained by the review team. A review of PIRs for the 22 projects, as well as data provided by the IFC for evidence of estimated actual financial investment by private sector actors as a result of the project, shows that in nearly every case, the project has not been adequately tracking the level of private sector investment connected with the project during its implementation.

⁵³ Hungary Public Sector Energy Efficiency Programme Project

⁵⁴ Lithuania Vilnius Heat Demand Management Project

242. In most cases, figures from PIRs on “Actual Financing” by the private sector are not based on any new statistical data. The IFC uses the lower end of the figures for anticipated private sector funding in the ELI project document, as do most of the PIRs with such references. The China CFC-Free Refrigerators project was reported in the 2003 PIR to be leveraging funding by the private sector at a rate that is expected to exceed the \$30 million anticipated in the Project Document, but “comprehensive data” were not yet available. The IFC estimates that the SME program is leveraging smaller investments with a ratio of GEF investment to private sector investment of roughly 3.1, compared with the 4.1 anticipated at GEF approval.

243. One exception to that generalization is the HEECP, which according to the IFC, estimates that US\$15 million in private sector investment has taken place thus far in response to the use of a guarantee mechanism. This is in contrast to the US\$91 million that had been anticipated at the time of project approval.

Conclusions

244. Whereas the total estimated cofunding of the 60 projects reviewed is considerable (US\$2,138 million), and has a cofunding ratio to GEF allocation of 3.7, the cofunding by private sector actors is only US\$391 million. These figures relate to planned cofunding at the project design stage. Project documents do not always distinguish between planned private sector cofinancing of a project and the subsequent leveraging of additional investments by the project, and nor are they consistent in the way they treat anticipated investment by the private sector.

Recommendation

245. GEF should establish a consistent system of data collection on anticipated and actual private sector financing that clearly distinguishes between private sector cofunding and leveraged funding. It should also require projects with a private sector engagement component to collect and report regularly on private sector–leveraged funding.

Table 1: Private Sector Financing in 20 Projects with Private Sector Engagement

Country	Project Name	IA	Total GEF funding (US\$ mill)	Private co. funding (US\$ mill)	Cofinancing ratio
Global	Efficient Lighting Initiative (Tranche II)	WB/IFC	5,650	30,000	5.31
China	Efficient Refrigerators	UNDP	9,860	29,720	3.01
Global	Photovoltaic Market Transformation Initiative (IFC)	WB/IFC	30,375	90,000	2.96
Mexico	Hybrid Solar Thermal Power Plant	WB	49,700	127,600	2.57
Global	Solar Development Group (SDG)	WB/IFC	10,000	22,500	2.25
Sri Lanka	Renewable Energy	WB	8,000	17,900	2.24
Thailand	Removal of Barriers to Biomass Power	UNDP	6,830	15,000	2.20
India	Energy Efficiency	WB	5,000	10,000	2.00
Philippines	Palawan New and Renewable Energy	UNDP	750	1,400	1.87
Chile	Rural Electrification with Renewable Energy	UNDP	6,067	7,628	1.26
Ecuador	Power and Communications	WB	2,500	2,890	1.16
Uganda	Kibale Forest Wild Coffee Project	WB	750	750	1.00
Brazil	Energy Efficiency Project	WB	20,000	20,000	1.00
China	Barrier Removal for Efficient Lighting	UNDP	8,136	6,955	0.85
Malaysia	Industrial Energy Efficiency Improvement Project	UNDP	7,300	5,260	0.72
Costa Rica	Biodiversity Conservation in Cacao Agro-forestry	WB	750	250	0.33
Egypt	Fuel Cell Bus	UNDP	6,510	1,497	0.23
Brazil	Hydrogen Fuel Cell Buses	UNDP	12,618	1,600	0.13
Croatia	Energy Efficiency of Residential and Service Sectors	UNDP	4,590	190	0.04
Mexico	El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes	WB	750	18	0.02
Totals			196,136	391,158	1.99

VII. OVERALL CONCLUSIONS AND RECOMMENDATIONS

Conclusions

246. The two policy papers adopted by the Council in 1996 and 1999 state that GEF private sector engagement will take place at two different levels. In the narrower and more rigorous definition, engagement involves the GEF providing incentives to private sector entrepreneurs to invest in ventures that are to create global environmental benefit. In the broader sense of the term, engagement also includes GEF-supported activities to help make policy and regulatory frameworks more supportive of private sector investment decisions that are more environmentally sound.

247. The GEF private sector portfolio has evolved from the early days of the pilot phase without specific policies or guidelines for private sector engagement. The 1996 and 1999 Council papers lay down some essential principles, but do not clarify the objectives, scope, and guidelines of engagement. The current policies are rather rudimentary and there are a number of unresolved issues.

248. Of all the 621 regular- and medium-size GEF projects under implementation as of June 30, 2002, 60 were found to involve cooperation with the private sector beyond the level of procurement of goods and services. In only about 20 of these projects did the private sector contribute significant resources or assume a substantial financial risk.

249. GEF has utilized both grant and nongrant assistance as its financial modalities in engaging the private sector. Grants have been used to stimulate markets through awareness raising, standard setting, and certification (for example, of energy-efficient lightbulbs and refrigerators). Grants have also been used for technical assistance, to cover market development costs, and to provide a degree of subsidy to the investments. Nongrant modalities have included contingent grants, loans, partial risk guarantees, investment funds, and reserve funds. Nongrant modalities have been most appropriate where projects were potentially economic, but where there might be a lack of local expertise, environmental uncertainties, or other obstacles.

250. The appropriateness of particular financing mechanisms in the climate focal area is highly dependent on the state of the market. Noncontingent finance may be the most appropriate for markets in early stages of development of energy-efficient equipment, whereas more sophisticated mechanisms may be better suited for markets whose development is farther along. ESCOs can play a significant role in developing energy efficiency projects. However, in many countries, it is difficult to set up ESCOs successfully, because of lack of the necessary equity basis for obtaining loans from local banks. Three projects involving equity funds have faced great problems. It is not clear whether this is due to performance issues in the three cases or because equity funds require high rates of return with security exit in 7–10 years, which may be difficult to achieve in a sector with strong competition from traditional technologies.

251. The soundness of business plans of investors and the quality of project management and supervision have generally been more important than the choice of financial instruments in the climate focal area.

252. Financing mechanisms used in the biodiversity focal area included an equity fund specifically for biodiversity investments, loans through financial intermediaries, and grant financing for direct payments to landowners and for technical assistance. The equity fund approach may not have been adequately tested in the case of biodiversity, because three of the four companies in which the Terra Capital Fund invested quickly went bankrupt. The only lending for biodiversity through financial intermediaries was for ecotourism, and the critical issue there was the business plan of the investor, not the financing mechanism.

253. An overriding problem with both public and private sector engagement is the slow maturing of GEF projects. During this review it was found that considerable delays have occurred at all stages in the project cycle from identification and preparation through approval and implementation. This may be due to a number of reasons, including poor and unrealistic project designs, lack of adaptation to changing realities on the ground, and weaknesses in project management and supervision. The delays have often reduced the likelihood of attaining the desired impacts and the likelihood of replication.

254. As required by GEF procedures, GEF projects have been duly approved by host country governments. However, governments have raised questions in a few cases about the approval procedures for subprojects linked to regional or global projects. In those cases country ownership was apparently weak. More often projects lacked strong proponents and champions, whether in the public sector or in host governments.

255. Supportive government laws and policies are necessary for project success. When the host country government has pursued policies that reflect less than enthusiastic support for the project objective, it has posed obstacles to meeting that objective.

256. Monitoring and evaluation frameworks for most private sector engagement projects do not explicitly aim at measuring environmental impacts. Baseline studies are rare in biodiversity-related projects, and some climate-related projects lack methods for measuring GHG emissions reductions under the project. IFC projects have financial and environmental performance criteria as triggers for disbursement, but IFC thus far has lacked the capacity to monitor or evaluate the degree to which subprojects have delivered global environmental benefits.

257. It is yet not possible to draw a firm conclusion about the degree to which GEF projects have been successful in leveraging private sector financial risk sharing on behalf of GEF-relevant objectives, because the GEF has not been organized to collect systematic data on leveraging.

258. The selection of the right financial partners for the planning and implementation of GEF private sector engagement projects and provision of appropriate incentives for achieving GEF objectives are important factors in successful project outcomes. Selection of partners on a clear, transparent, and fully competitive basis through bidding or an open negotiation process would be advantageous to the GEF,

not only for ensuring the best-informed choice of partners, but also for negotiating costs, benefits, and risk sharing. However, most financial partners in World Bank and IFC energy efficiency projects have been selected on a sole-source basis, or based solely on the qualifications early in the project cycle, before the project was fully designed.⁵⁵ The review team has found that provisions for compensation and incentives to financial intermediaries in the SME for achieving GEF objectives have lacked objective, transparent criteria and indicators.

259. The 1999 GEF Council decision that contingent loans and grants must be carefully structured to include risk-sharing arrangements has not been adequately implemented. The GEF does not have the information and legal tools it needs to implement the policy, with the result that GEF is too often liable for first loss and is unable to handle reflows to which it would otherwise be entitled.

260. Some projects have addressed similar markets in different countries, and in a number of cases have used the same approaches, such as small-scale credit systems and risk guarantees. GEF has not yet carried out any joint learning process in regard to experiences with different approaches and instruments in the two focal areas of climate change and biodiversity. Such joint learning processes might provide the basis for recommendations concerning how and under what circumstances to use such approaches and instruments in the future.

Climate Change

261. GEF projects aiming at influencing public policy and regulatory frameworks appear to have been successful in creating conditions for market transformation in energy-efficient equipment. Promising results have been achieved through projects related to certification, labeling, and standard setting, with the support of public sector agencies, private manufacturers, and other private sector actors. These projects have demonstrated highly cost-effective options for reduction of CO₂ emissions through promotion of markets for highly energy-efficient refrigerators, fluorescent lighting equipment, building insulation, and air conditioning.

262. One investment project in climate change (China EMC) can be credited with triggering the creation in China of a large private sector energy efficiency business, with a wide range of private energy service companies ready to take financial risks in order to tackle this market. Therefore China EMC is a positive model for future direct engagement of the private sector in energy efficiency.

263. The results of projects aimed at developing a market for off-grid energy from photovoltaic technologies, which represent the vast majority of GEF projects in renewable energy, have not been so encouraging. These projects face a number of obstacles, including relatively high cost to consumers, lower than expected demand, service problems for dispersed rural populations, competition with the grid-based energy, and especially the absence of risk-sharing by PV manufacturers and other private sector actors.

⁵⁵ World Bank, 2004, p.26.

264. During the design phase of PV-related projects, there was often inadequate assessment of market issues and of the strengths and weaknesses of the private sector actors, whose participation is essential for success.

Biodiversity

265. Coffee and cacao cultivation can provide significant biodiversity benefits in areas where very little of the original forest cover remains, depending on the type of shade system employed. However, projects utilizing certification systems to provide an incentive for biodiversity-friendly coffee cultivation have been unable to overcome the absence of a market for coffee cultivated in a biodiversity-friendly manner. Although coffee and cacao are marketed under various specialty coffee labels related to fair trade and the environment that provide premium prices, certification does not provide any incentive for maintaining or achieving minimum biodiversity-related standards.

266. An innovative approach to the creation of incentives for conservation of biodiversity on private lands is the concept of payment for environmental services (PES), which has been pioneered in Costa Rica. When the application of PES involves logging and monoculture plantations, the approach raises complex issues concerning biodiversity conservation policy.

267. Ecotourism can benefit biodiversity conservation by providing additional financial support for protected area management while minimizing impacts on the ecosystem. The main challenge to GEF in supporting investment in ecotourism is to minimize the risk of failure associated with location and to be assured of government biodiversity policies and enforcement practices that provided a minimum level of protection for protected area.

268. Private lands conservation is an important adjunct to public protected areas in Latin America, where so much of the remaining forested land is privately owned. Some limited progress has been made in GEF-supported efforts to reform legal and policy frameworks to support private protected areas. However, it is still too early to assess the relative success of supporting private land conservation, mainly through assistance to landowners to establish ecotourism projects on their land, and direct negotiation of conservation easements by NGOs.

Recommendations

General

269. GEF should prepare a comprehensive strategy for engaging with the private sector both directly and indirectly by influencing overall policy frameworks and market conditions. The new strategy should include (a) the objectives of private sector engagement within the context of GEF's overall and sector strategies; (b) the use of appropriate modalities of support; (c) GEF policy on risk sharing, co-funding and leveraged funding; (d) the establishment of a transparent tracking tool to monitor project progress; and (e) further guidelines for the measurement of global environmental impact.

270. GEF should seek a higher degree of risk sharing among project participants, based on respective roles of partners (including IAs, guarantors, lenders, ESCOs, equipment suppliers, and end-

users), to create better incentives for project success and to avoid moral hazards. GEF should try to avoid taking risks that are not related to its incremental financial role. For this purpose, individual contracts under GEF-supported projects should be accessible to the GEF secretariat and the M&E unit on request. In particular cases, the GEF Secretariat should negotiate legal agreements with the IA implementing or executing the project to ascertain adequate and realistic cost sharing.

271. GEF must make further efforts to ensure real country ownership of its projects and subprojects. Explicit host country approval as well as financial and policy support are required. GEF projects and subprojects must have enthusiastic supporters within the government and the private sector in the host country.

272. GEF needs to develop clear guidelines on the identification and measurement of global environmental benefits in each focal area, also in conjunction with private sector projects.

273. GEF should develop a more rigorous definition of leveraged funding and arrange for the collection of accurate data on the levels of cofunding and leveraged funding achieved.

274. The time between initial proposal and final approval of projects that engage the private sector must be made more predictable and transparent. The GEF Secretariat and IAs should adopt clearer business norms for providing information to project proponents and other stakeholders on the status of project proposals, the anticipated time required for various steps toward approval, and the reasons for any delays. For this purpose, an online project tracking system should be developed.

275. The GEF Secretariat and IAs should have on their staff experts on global environmental issues, business finance, and public sector policies to influence relevant markets. The adequacy of capacity and staff resources should be assessed systematically at project approval, and as required during implementation.

276. GEF should not attempt to enforce on the three IAs an agreement on role and comparative advantages. However, it should work with each of the IAs as well as executing agencies to define the types of projects that are most appropriate to the capabilities and comparative advantages of each agency.

277. Financial intermediaries, fund managers, and similar partners should be selected competitively and on the basis of transparent criteria. The criteria for decisions on how each financial intermediary is rewarded for project success should also be clear and transparent.

278. In cooperation with other GEF entities, the GEF Secretariat needs to distil and compile joint experiences and lessons learned on such issues as financial tools, risk mitigation, credit systems, working with intermediaries, and economic viability of various technology applications and approaches.

279. GEF needs more detailed guidelines on M&E systems for various types of private sector engagement. Subprojects of umbrella projects should submit annual reports on progress towards achieving objectives, including progress on establishing M&E systems.

Climate Change

280. GEF should review its renewable energy policy and not approve new PV projects without very convincing evidence that the past obstacles to success are likely to be absent or can be overcome.

Biodiversity

281. GEF should not finance new projects aimed at certification of coffee or cacao or other commodities unless the certification system meets acceptable minimum biodiversity criteria, or unless GEF could decisively influence the establishment of and the adherence to such criteria. GEF should continue to study carefully the evolution of the markets in order to determine its possible roles in relation to the various actors.

282. GEF should continue to look for additional opportunities to support systems of payments to landowners as an approach to biodiversity conservation in countries where forests with high biodiversity values are privately owned. In any such project GEF should focus on long-term protection of biodiversity by emphasizing the need for easement contracts or conservation approaches of longer duration.

283. Prior to approval of a private sector ecotourism project, a critical minimum level of government efforts for protection should be agreed on.

284. GEF should continue to support work on reforming legal and policy frameworks for private land conservation in Latin America.

TERMS OF REFERENCE

REVIEW OF GEF ENGAGEMENT WITH THE PRIVATE SECTOR

Background

Since GEF's inception as a pilot facility in 1991, it has engaged with the private sector as a key actor to achieve global environmental benefits. During the pilot phase, implementing agencies and project executing agencies gained experience with a variety of approaches to private sector participation in the GEF. 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* (the Instrument) lists the private sector among the various partners that the GEF is expected to engage.⁵⁶ The Council reviewed document GEF/C.7/12, *GEF Strategy for Engaging the Private Sector*, at its April 1996 meeting and agreed that the paper should be revised to reflect a more strategic approach.⁵⁷

The *First Overall Performance Study* (OPS1) of the GEF, completed in 1998, noted that the private sector has had little opportunity to directly execute GEF projects, and that their role has been mostly limited to providing procured equipment and services or, in some cases, to acting in an advisory capacity. OPS1 concluded that (a) the GEF has been able to mobilize a small but growing level of financing for projects, but comparatively little by way of mainstream private financial institutions; (b) GEF assistance can be provided to address commercial risks without subsidizing private profits through measures such as low interest loans, contingent payment features, and partial guarantees; and (c) GEF is urged to engage private financiers to mobilize additional resources from banks, insurance companies, and pension funds.

At the October 1998 meeting, the Council requested that the "Secretariat prepare a paper for Council review on the private sector and the GEF. The paper should address modalities to facilitate private sector involvement in GEF-financed activities, including partnerships with the private sector to promote the transfer of technology." The Council discussed document GEF/C.13/Inf.5, *Engaging the Private Sector in GEF Activities*, at its May 1999 meeting. The Council welcomed the document and "requested the Secretariat and the Implementing Agencies to proceed in preparing projects that

⁵⁶ Para 28 of the Instrument: "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 institutions, 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."

⁵⁷ The Council recommended that "issues related to the involvement of the private sector together with financing modalities should be addressed in the revised paper," and a revised paper was submitted for Council consideration.

incorporate approaches described in the document.”⁵⁸ The Council also requested the Secretariat to keep the Council informed of progress made in collaborating with the private sector.

The *Second Overall Performance Study* (OPS2) of the GEF assessed private sector involvement in GEF activities, and concluded, “the GEF needs to engage the private sector more extensively.” The report further suggested that

Council endorsement of expanded participation of the private sector and explicit acceptance of the risks involved would help remove uncertainties within the GEF. Clear guidelines from the GEF Secretariat on new modalities should have high priority, as should the acquisition of substantially increased and global environment-related private sector expertise for the GEF Secretariat.⁵⁹

The GEF has engaged the private sector by (a) directly executing projects through, or in partnership with, private sector actors; and (b) developing partnerships outside the portfolio of projects.

In addition, the GEF portfolio has a large number of projects executed through public sector agencies that (a) aim to develop capacity, markets, and other enabling conditions for the private sector; or (b) have a significant but unintended impact, positive or negative, on markets and the private sector.

Objective of Review

The overall objective of the proposed review is to assess the results of engagement between the GEF and the private sector since the inception of the GEF. For the purposes of this review, “private sector enterprises” are defined as those that are privately incorporated or publicly traded entities. The primary focus of the review will be on projects that involvement engagement of the private sector projects, as referred to in paragraph 5. The impact of public sector projects, referred to in paragraph 6, will be reviewed within two thematic areas in the portfolio: energy efficiency projects⁶⁰ in the climate change focal area, and ecotourism in the biodiversity focal area.

Specific objectives of the review are as follows:

- (a) Identify the instruments employed by the GEF and its implementing agencies in engaging the private sector.
- (b) Assess the results and impacts of projects on the private sector.
- (c) Document lessons learned.
- (d) Recommend future directions.

⁵⁸ Joint Summary of the Chairs, GEF Council Meeting, May 1999.

⁵⁹ GEF, 2000, *Second Overall Performance Study*, p. 108.

⁶⁰ Including ESCOs.

Scope of Review

Specific activities to be conducted with regard to the portfolio of projects referred to in paragraphs 5 (i), 6 (i) and 6 (ii) are as follows:

Portfolio Overview

- (a) Identify those projects, both full- and medium-size, with significant private sector engagement.⁶¹
- (b) Identify the types of private sector actors involved—large multinational firms, national firms, small and medium enterprises, cooperatives, industry associations—and the types of partnerships between different private sector actors.
- (c) For the selected set of projects identify the risk or barrier to be tackled and the different modalities or instruments employed. These instruments may include, among others, private equity, venture capital, credit instruments, guarantees, contingent finance, grants, training, promotion, information, technology transfer and capacity building. Describe the evolution, if any, in the types of risks or barriers addressed and the choice of these instruments in the portfolio.⁶² Assess whether there was a framework within which projects and types of projects were developed by the GEF and the implementing and executing agencies.
- (d) Document the financing structure of the projects, identifying GEF and non-GEF resources committed to project design. Compute the leverage ratio—non-GEF resources to GEF resources—for the projects at key stages of the entire project cycle. Identify the global environmental benefits proposed to be delivered by projects.
- (e) Prepare a summary of portfolio overview by implementing or executing agency, type of private sector actor, geographical region, focal area, and so forth.

Project Design and Implementation

- (a) Identify and assess the roles played by countries, government agencies, private sector proponents, implementing and executing agencies, and the GEF Secretariat in developing the projects.
- (b) Assess whether projects are designed to meet the priorities of the participating countries.

⁶¹ Projects in which the private sector is involved only in procurement of goods or consulting services will be not be included in this review.

⁶² Identify if there are any specific tendencies in instruments employed among the different GEF focal areas.

- (c) Assess whether the projects are designed and implemented to help develop sustainable local businesses or markets.
- (d) Identify the sources and assess the quality of technical assistance available to design and implement the projects.
- (e) Assess the roles, level, and mode of participation of different stakeholders (governments, NGOs, private sector, academic and research institutions, and so forth) in project design and implementation.
- (f) Assess the reporting and management procedures, including monitoring and evaluation systems, during implementation of projects.

Results and Impacts

- (a) Assess the results and impacts of projects, both positive and negative, if any, taking into account the conditions of the market, institutional actors, perceived risk by investors, and the status of the project in the implementation cycle, and employing the following parameters:
 - (1) Achievement of outputs and objectives, with particular focus on achievement of global environmental benefits and their relationship to incremental costs financed by the GEF.
 - (2) Sustainability of benefits, removal of barriers to commercial investment, and other steps undertaken to ensure continuation of project benefits;
 - (3) Replication—impacts on the larger market by the project(s); indications of other private sector actors/resources entering the market without GEF assistance.
 - (4) Leverage—the actual leveraging (non-GEF resources/GEF resources) at completion of project implementation.
 - (5) Transfer of technology along with supporting skills and training to adapt technology to local needs and circumstances.
 - (6) Capacity building for managing funds and other related activities in the private sector (in the participating countries) for environmental management.
 - (7) Type of the firm(s) engaged in the project—national and international small, medium, and large.

- (8) Relationships⁶³ and division of benefits⁶⁴ between local and international private sector partners.
- (b) Assess the appropriateness and effectiveness of the financing or investment instruments employed in terms of the following:
 - (1) Ability to employ GEF resources strategically in dealing with incremental costs or incremental risks.
 - (2) Ability to mitigate specific classes of risks or barriers.
 - (3) Safeguards to prevent moral hazard or adverse selection; management incentives; risk coverage versus incentive for success.
 - (4) Role in attainment of results in terms of (a) 1–8.
 - (c) Evaluate the appropriateness of the project partners involved in the following terms:
 - (1) Size and stability of commitment of own or other resources to the project(s).
 - (2) Role and reputation in the domestic market environment and ability to influence it.
 - (d) Assess the appropriateness of the implementing or executing agency involved in the following terms:
 - (1) Comparative advantage—institutional structure and culture to engage the private sector; skills in technology transfer and provision; knowledge of markets, expertise in developing country and economies in transition finance, technologies and business.
 - (2) Staff skills, incentives, and training.

Outside the portfolio of projects, referred to in para 5 (ii), the review will:

- (a) Identify GEF activities, including, among others, country dialogue workshops that have been targeted towards enhancing private sector participation in the GEF.
- (b) Assess the effectiveness of these activities (1) on the portfolio, in terms of projects proposed for GEF support; and (2) other discernable impacts in terms of encouraging private sector activity geared towards obtaining global environmental benefits.

⁶³ For example, as buyers, suppliers, creation of future business opportunities, and so forth.

⁶⁴ Including earnings, capacity building, and employment generation.

Best Practices

- (a) Describe remedial actions taken by implementing agencies or executing agencies toward early problems identified with the design and implementation of projects and nonproject activities.
- (b) Identify the best practices and lessons learned in the design and implementation of project and nonproject activities involving the private sector.

Recommendations

- (a) Recommend broadly what improvements are required in the approach, both project and nonproject, undertaken by the GEF in engaging the private sector.

Methodology

The review will be carried out in two phases: (1) a desk review and consultation with the implementing and executing agencies to identify the major issues emerging from the portfolio, and (2) following visits to selected projects to assess the issues in depth. The criteria for selecting projects for field visits are expected to emerge from the desk review, and will be discussed and agreed on by the team. The proposed methodology for the study will cover the following broad areas:

- (a) Review of relevant documentation at the GEF Secretariat, United Nations Development Programme, United Nations Environment Programme, the World Bank/International Finance Corporation, and the relevant Executing Agencies under Expanded Opportunities.
- (b) Visits to the implementing agencies and executing agencies and discussions with GEF regional coordinators and task managers of enabling activities.
- (c) Consultations with relevant stakeholders such as private sector project proponents; business associations; relevant bilateral and multilateral agencies; and international, regional, and local NGOs, including academic institutions. Consultations with relevant private sector associations—national and international—who are not directly associated with the project.
- (d) Preparation of project case studies on selected projects by local consultants.
- (e) Visits to projects and project management units by study team members.

Study Team

A team comprised of members from the implementing agencies, the GEF Secretariat, the GEF Monitoring and Evaluation Unit, an international consultant, and local in-country consultants will carry out the study. The members of the study team are as follows:

- Ramesh Ramankutty, GEF Monitoring and Evaluation team, task manager

- Saima Qadir, Private Sector specialist, GEF Secretariat
- Bernard Jamet, Technical Expert (international consultant)
- Daniel Young, researcher (consultant)
- Dana Younger/Sam Wedderburn, World Bank/IFC
- Andrew Bovarnick/Geordie Colville, UNDP
- Tom Hamlin/Mark Radka, UNEP
- Local consultants (to be identified depending on projects for case studies and field visits)⁶⁵

The team will participate in all stages of the review, including developing a detailed plan and methodology for the review, and will participate in initial synthesis discussions on findings and conclusions following project visits. Local consultants will participate in the team visits to projects and preparation of selected project case studies.

The task manager (with inputs from the team) will prepare an Inception Report I to launch the desk review, which will contain an overview of the data sources. Following the desk review, the task manager (with team inputs) will prepare Inception Report II with plans on how to address the various issues, outlines of questionnaires or structured interview guides, a list of projects proposed for case studies and visits, and a schedule for the execution of the review.

Output

The task manager will be responsible for preparing the first draft of the report, based on project visit reports and on inputs provided by the team members.⁶⁶ Based on feedback received, a second draft will be prepared for management review at the GEF Secretariat and the implementing agencies. Following management review, a third draft will be prepared and forwarded to project managers and countries covered under visits and case studies for their comments. Based on feedback, the final report will be prepared for submission to the GEF Council. The final report will consist of 30–50 pages plus appendices, including, among other things, a list of all interviewees and data sources.

⁶⁵ Consultants should have transactional private sector experience and/or knowledge.

⁶⁶ Team members will be requested to provide specific inputs.

WORLD BANK GROUP COMMENTS ON: “THE REVIEW OF GEF ENGAGEMENT WITH THE PRIVATE SECTOR FINAL REPORT”

1. The World Bank Group reaffirms its support for an evaluation of GEF’s involvement with the private sector. We believe it is important to review the implementation experience of these projects in order to identify the strengths and challenges so that lessons can be derived to guide future activities. We are concerned, however, that the “Final Report” does not meet these objectives. We are especially troubled by the failure in the report to recognize and adequately respond to the extensive comments previously submitted by the Bank Group. Although some beneficial changes have been made from the previous draft, many errors and misrepresentations remain . It is also worth referring to paragraph 11 of this report which shows that only one of the authors was involved in either the field visits or in preparing earlier drafts. This disconnect most likely contributed to many of the inaccuracies and discrepancies found in the report. We remain un-convinced that continued re-drafting can achieve the improvement in substance and quality required to satisfactorily address the study’s objectives. We therefore requested the GEF M&E Unit to attach our comments to the Report.
2. The introduction of conclusions and recommendations in the report without prior task force discussion or circulation introduces another source of errors and misinterpretation. Conclusions and recommendations are in numerous instances based on very limited evidence or disputed “facts”. Broad statements about GEF strategy and market opportunities, which rely primarily on external literature rather than on actual project experience – particularly with respect to certification of coffee and off-grid renewable energy -- reflect fundamental misunderstandings of project objectives and the factors that influence market development. Such conclusions cannot be supported by the work done for the project and should simply be excised.
3. Many of the errors in the current draft are repeated or inadequately revised versions taken from the previous interim reports. One dramatic case in point is the IFC Efficient Lighting Initiative, which the report alleges will not have sustainable results due to the failure to involve manufacturers more as financial contributors. The IFC provided extensive documented evidence to correct assertions of deficiencies with respect of manufacturer and other private sector participation in both financial and non-cash services; these were entirely ignored and the original conclusions repeated. The author of the report is entitled to an opinion that prospects for sustainability “appear doubtful” (para. 41), but the failure to even acknowledge the extensive response is troubling.
4. The absence of a clear framework or analytical approach. The report has no overall framework to guide its presentation. The Bank-Group had strongly recommended in a meeting of Oct. 23, 2003 to re-organize the report according to the 4 objectives in par. 8 of the TOR and other key elements of the TOR, but this approach was not taken. Instead, observations are made without

a proper context. The limited number and range of projects studied that are not necessarily representative of their thematic areas undermines the broad conclusions and lessons that are drawn. The lessons are further weakened as they are often based on misconceptions, inaccurate analyses of individual projects (see below for corrections on specific projects) and limited information causing several caveats to be placed when conclusions are made.

5. There is in general a lack of reference to learning from experience in recognizing the evolution of project design over time. This is illustrated by the process of building on success in moving from Hungary to CEEF and now Russia as models for financial intermediation in energy efficiency, and by the changes from SME to EBFP in the change from project lending to financial intermediation.
6. The report retains the argument that the Hungary EE project, while seemingly successful, took place in the context of several other initiatives which may also have had some beneficial impact. This is another point that was previously addressed and to which there was no response. This logic could be applied to every successful project -- including successful public sector projects. There is no reason to presume that changes in the Hungary efficiency market were uniquely or particularly attributable to non-project related factors, when evidence was supplied of directly related project impacts.
7. The review should have evaluated each private-sector project against the particular approach it chose -- and not some fixed idea of how all GEF projects should be structured. The IFC/GEF SME Program is a case in point: The objective of the SME Program was to experiment with different models to engage the private sector at the SME level to deliver global environmental benefits. The SME Program was designed to generate lessons learned on the types of activities and models that are viable and bring about GEF benefits. The engagement took many forms from direct SME finance (Soluz Honduras) to leveraging of intermediaries to reach a larger number of SMEs and micro-enterprises (Grameen Shakti, Conservation International) or to reach a larger market (El-Sewedy, Fundecor). It was not the intention to promote only those projects that had already demonstrated the business case for implementing GEF-eligible activities. Demonstrating business viability for SMEs was the driving force to get replication and acceptance of the types of activities that were promoted in biodiversity conservation and climate change mitigation. Unfortunately, the Review focuses on project-level assessments to draw broad conclusions on GEF and the private sector, which is clearly inappropriate.
8. For similar reasons, the selective reference to particular financial modalities as critical for risk sharing is misleading. It does not make sense to start with the solution (in this case guarantees) and evaluate a program by how often that solution is applied. Moreover, the IFC has extensive experience with the cited instruments in its GEF portfolio.
9. The proposed conclusions and recommendations reach beyond the scope of the project and are not adequately supported by the number or underlying facts of the projects studied. An example of this tendency in the report is the conclusions regarding renewable energy where far reaching recommendations on GEF's "Renewable Energy Policy" are based on a review of a limited number of projects and data. To begin with there is no such policy, guidance comes from Operational Programs and Strategic Priorities. The recommendation to stop funding PV

projects goes well beyond the scope of the review and is contrary to the finding that many projects are still at an early stage of implementation. Furthermore, the review did not undertake a comprehensive study of PV projects, for example, to identify how many PV systems were expected to be provided, how many have been installed or working and whether any such use implies a reduction of GHG emissions. Additionally, several more recently approved projects in Bangladesh, Mozambique, Bolivia, Uganda and Ethiopia among others, have addressed many of the issues associated with earlier PV projects and have PV components linked to broader rural electrification or rural development efforts. It would have been more useful for the report to recommend incorporation of lessons. In extreme cases, broad conclusions are drawn on the basis of small investments in sub-projects, e.g., the Pico Bonito tourist lodge is cited as the basis for general conclusions about eco-tourism projects, and the Soluz SME project is one of a small number of examples cited for sweeping changes in the GEF approach to renewable energy.

10. Some major conclusions are stated with little or even no supporting evidence. There is no convincing evidence presented to support the contention that GEF private sector projects are maturing slowly as the data presented did not differentiate public from private sector projects. Furthermore, it is inappropriate to simply list the elapsed time between processing steps for each IA without explaining the differences in how these steps are defined and the characteristics of the different types of projects involved. While slow maturation of projects is a general portfolio issue, and a repeated focus of the Overall Performance Studies, the Bank Group's experience directly contradicts the notion that it has been a factor in affecting private sector participation.
11. The discussion of institutional roles and comparative advantage is poorly stated and misleading. There are several misleading statements about IFC and the respective roles of IFC and the World Bank. The report states that "It is not clear that IFC has a comparative advantage in market transformation projects which is only based on grant financing and technical assistance to the development ofmotors and buildings." This characterization of the IFC is misleading and does not adequately recognize the importance of the IFCs dedicated role as a private sector oriented agency with substantial specialized knowledge of risk assessment and financial instruments. The IFC has particular expertise with respect to guarantees and contingent loans. However, the requirement for commercial returns – fundamental to market sustainability – is characterized unfairly as a negative factor. Aside from technical assistance, IFC typically makes resources available as loans with private firms responsible for the majority of investment costs. The basic features of these arrangements are fully disclosed in project documents. Mention is also made of competition between IFC and the World Bank for GEF projects, but this is rare and not worthy of mention in this report .
12. The discussion of co-financing is inaccurate and misleading. The effort to characterize co-financing is misleading insofar as it fails to recognize that substantial co-financing is not necessarily indicative of project success in private sector projects. As the HEECP project

illustrates, the measure of success may be investment leveraged and not directly tied to GEF contributions; successful financial intermediation may avoid the need for GEF resources.

13. There is inadequate basis for recommending that individual contracts be made available to the GEF Secretariat. This could require substantial negotiation of legal provisions related to business information, and could add substantial additional time and complexity to already lengthy GEF procedures without any offsetting demonstrated purpose or benefit.
14. The assertion that private sector projects depend on governmental participation is a generalization and not supported by analysis. A few projects are cited without meaningful evidence. The issue is more accurately whether market conditions – including any relevant government policies -- are properly analyzed as part of project design. If so, a special focus on government policy should not be necessary. The assertion that market transforming energy efficiency projects are particularly dependent on government leadership is similarly lacking in evidence and is in fact contradicted by IFC experience in efficient lighting.
15. Finally, the scope of work for the study includes assessment of GEF efforts to engage the private sector outside of its projects portfolio, for example through CDWs and other modalities. However, the report focuses exclusively on project experience and does not attempt to assess the impacts and lessons from these other non-project activities.

TABLE 2: PROJECTS REVIEWED

Country	Project	IA	GEF funding (US\$ mill)	Total co-funding (US\$ mill)	Cofunding ratio
Sri Lanka	Renewable Energy	World Bank	8,000	125,800	15.7
Mauritius	Sugar Energy Bio-Energy Technology	World Bank	3,300	51,800	15.7
Thailand	Removal of Barriers to Biomass Power	UNDP	6,830	101,630	14.9
Ecuador	Power and Communications	World Bank	2,840	40,410	14.2
Argentina	Renewable Energy in Rural Markets	World Bank	10,115	110,500	10.9
Philippines	Asia Conservation Foundation	IFC	1,600	15,300	9.6
Regional	EcoEnterprises Fund	IFC	1,000	9,000	9.0
Costa Rica	Tejona Wind Power*	World Bank	3,300	28,000	8.5
Slovak Republic	Chemosvit Cogeneration	World Bank	2,200	16,200	7.4
Global	Renewable Energy and Energy Efficiency Fund	IFC	30,000	210,000	7.0
Sri Lanka	Energy Services Delivery	World Bank	7,500	49,400	6.6
India	Energy Efficiency Project†	World Bank	5,000	32,000	6.4
Syria	Supply Side Efficiency and Energy Conservation and Planning	UNDP	4,070	25,785	6.3
Global	Efficient Lighting Initiative (Tranche II)	IFC	5,650	33,000	5.8
China	Energy Conservation*	World Bank	22,350	124,300	5.6
Lithuania	Vilnius District Heating	World Bank	10,000	55,300	5.5
Brazil	Energy Efficiency Project	World Bank	20,000	105,500	5.3
Regional	Terra Capital Biodiversity Enterprise Fund	IFC	5,000	25,000	5.0
Costa Rica	Ecomarkets*	World Bank	8,330	41,200	4.9
Uganda	Kibale Forest Wild Coffee*	World Bank	750	3,400	4.5
Chile	Rural Electrification with Renewable Energy	UNDP	6,067	26,330	4.3
El Salvador	Shade Coffee*	World Bank	750	3,085	4.1
Regional	Renewable Energy Development Program (Regional)	UNDP	4,426	17,911	4.0
Hungary	Energy Efficiency Co-financing Program*	IFC	5,000	20,000	4.0
Global	Solar Development Group*	IFC	10,000	40,000	4.0
India	Solar Thermal Power (India)	World Bank	49,000	156,500	3.2
Hungary	Public Sector Energy Efficiency Program*	UNDP	4,200	13,380	3.2
China	Efficient Refrigerators*	UNDP	9,860	31,290	3.2

Country	Project	IA	GEF funding	Total co-funding	Cofunding ratio
Costa Rica	Cacao Agro Forestry *	World Bank	750.00	2,293.00	3.1
Bangladesh	Rural Electrification and RE Development *	IFC	8,540.00	25,470.00	3.0
Global	Photovoltaic Market Transformation Initiative	IFC	30,375.00	90,000.00	3.0
Mexico	Hybrid Solar Thermal Power	World Bank	49,700.00	128,300.00	2.6
Philippines	Palawan New and Renewable Energy and Livelihood Support	UNDP	750.00	1,800.00	2.4
Romania	Energy Efficiency Project	World Bank	10,350.00	24,000.00	2.3
China	Efficient Lighting *	UNDP	8,136.00	18,065.00	2.2
Indonesia	Komodo National Park Collaborative Management Initiative	IFC	5,375.00	11,600.00	2.2
China	Efficient Boilers *	World Bank	32,812.00	68,565.00	2.1
Brazil	Biomass Power Commercialization Demonstration	World Bank	40,475.00	82,000.00	2.0
Croatia	Residential and Service Sectors	UNDP	4,590.00	8,660.00	1.9
Mexico	El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes	World Bank	750.00	1,394.00	1.9
Regional	Commercializing Energy Efficiency Finance (CEEF - Tranche I)	IFC	11,250.00	20,850.00	1.9
Malaysia	Industrial Energy Efficiency Improvement Project	UNDP	7,300.00	13,490.00	1.8
Cambodia	Promotion of Renewable Energy Businesses to Enhance Access to Energy Services in Rural Areas	World Bank	6,080.00	10,500.00	1.7
Morocco	Solar Based Thermal Power Plant	World Bank	43,200.00	70,460.00	1.6
Chile	Valdivian Forests	World Bank	4,334.00	7,000.00	1.6
Mexico	Private Land Conservation Mechanisms	World Bank	750.00	1,100.00	1.5
Thailand	Building Chiller Replacement Program	World Bank	2,500.00	2,740.00	1.1
Egypt	Fuel Cell Bus	UNDP	6,510.00	7,088.00	1.1
Brazil	Biomass Power Generation: Sugarcane Bagasse & Trash	UNDP	3,750.00	2,770.00	0.7
Brazil	Hydrogen Fuel Cell	UNDP	12,618.00	9,169.00	0.7
Uganda	PV Project *	UNDP	1,756.00	1,200.00	0.7
Croatia	Karst Ecosystem Conservation Project	World Bank	5,300.00	3,300.00	0.6
Lebanon	Barrier Removal for Cross-sectoral Energy Efficiency	UNDP	3,400.00	2,000.00	0.6
Costa Rica	Biodiversity Resources Development (INBIO Bio-prospecting) *	World Bank	7,283.00	4,000.00	0.5
Grenada	Dry Forest Conservation	World Bank	748.00	404.00	0.5
Philippines	CEPALCO Distributed Generation PV Power Plant	World Bank	4,025.00	1,775.00	0.4
Bulgaria	Energy Efficiency Strategy to Mitigate Greenhouse Gas Emissions	UNDP	2,595.00	900.00	0.3
Brazil	Brazilian Biodiversity Fund	World Bank	20,000.00	5,000.00	0.3
Brazil	Establishment of Private Natural Heritage Reserves in the Brazilian Cerrado	UNDP	750.00	100.00	0.1
China	Town and Village Enterprises Energy Efficiency *	UNDP	1,000.00	0.00	0.0
Totals			584,890.00	2,138,014.00	3.7

* Projects visited under the review.