

Evaluation of GEF Engagement with the Private Sector

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FULL REPORT



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Evaluation of GEF Engagement with the Private Sector

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Foreword

The Evaluation of GEF Engagement with the Private Sector is one of the inputs into the Sixth Comprehensive Evaluation of the GEF (OPS6), which examines Global Environment Facility (GEF) support during the sixth replenishment period. The GEF has been engaging with the private sector since its inception and plays an important part in unlocking private sector potential through instruments in the GEF grant and nongrant toolbox.

The purpose of this evaluation is to assess the GEF's private sector engagement activities and provide insights and lessons leading to recommendations to strengthen GEF's collaboration with the private sector in GEF-7. The evaluation takes a mixed-methods approach with evidence from private sector engagement portfolio analysis, terminal evaluations of completed projects, a demand-side survey with select private sector entities, benchmarking with comparator environmental finance providers, and interviews conducted with private sector and GEF stakeholders as well as desktop research.

The GEF Independent Evaluation Office invited representatives from various stakeholder groups including consultants, the GEF Secretariat, and interviewees in May 2017 to discuss the findings of the evaluation in Washington, D.C. During the workshop, the context and methodology were presented, as well as the preliminary findings and emerging recommendations. A very fruitful open forum discussion followed. The final report was also presented to the GEF Council in May 2017.

I would like to thank everyone who actively supported this evaluation. Through this report, the GEF Independent Evaluation Office intends to share the lessons from the evaluation with a wider audience.

Final responsibility for this report remains firmly with the Office.



Juha I. Uitto
Director, GEF Independent Evaluation Office

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This report is the result of a collective effort. Baljit Wadhwa, Senior Evaluation Officer in the Independent Evaluation Office of the Global Environment Facility and Task Manager for the Evaluation of GEF Engagement with the Private Sector, provided leadership to the study. Geeta Batra, Chief Evaluation Officer, provided oversight and overall direction to the evaluation. The Office was supported by the consulting firm of Steward

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Abbreviations

CIF	Climate Investment Funds	PMIS	Project Management Information System
COP	conference of the parties	POP	persistent organic pollutant
CTF	Clean Technology Fund	PPP	public-private partnership
EBRD	European Bank for Reconstruction and Development	PSF	Private Sector Facility
EIB	European Investment Bank	RAF	Resource Allocation Framework
GCF	Green Climate Fund	SDG	Sustainable Development Goal
GEF	Global Environment Facility	SME	small or medium enterprise
IAP	integrated approach pilot	SREP	Scaling Up Renewable Energy Program
IDB	Inter-American Development Bank	STAR	System for Transparent Allocation of Resources
IEO	Independent Evaluation Office	UN	United Nations
IFC	International Finance Corporation	UNDP	United Nations Development Programme
MAP	medicinal and aromatic plants	UNEP	United Nations Environment Programme
MDB	multilateral development bank		
NGO	nongovernmental organization		
OPS6	Sixth Comprehensive Evaluation of the GEF		
PCB	polychlorinated biphenyl		

The GEF replenishment periods are as follows: pilot phase: 1991–94; GEF-1 1995–98; GEF-2: 1999–2002; GEF-3: 2003–06; GEF-4: 2006–10; GEF-5: 2010–14; GEF-6: 2014–18; GEF-7: 2018–22.

All dollar amounts are U.S. dollars unless otherwise indicated.

Executive summary

Background and objectives

In a world with a changing climate, rising populations, natural resource demands, and increasing environmental degradation, the Global Environment Facility's (GEF's) mandate to partner with the private sector to tackle environmental challenges, especially in the developing world, is as strong as ever. This mandate has been reinforced by explicit guidance to the GEF on private sector engagement from the various multilateral environmental agreements that it serves.

Although new opportunities are arising, many of the historic barriers to private investment and the GEF's engagement of the private sector remain. These include technology and market risk, inadequate regulatory regimes, lack of institutional capacity, and insufficient deal flow of investible projects at the requisite size and scale, among other challenges. Overall, progress in green investments continues to be outpaced by investment in fossil fuel-intensive, inefficient infrastructures.

GEF strategies to engage the private sector and encourage investment have historically included a variety of intervention models: (1) transforming policy and regulatory environments to encourage sustainable business investment, (2) deploying innovative financial instruments, (3) convening multistakeholder alliances, (4) strengthening institutional capacity, and (5) demonstrating innovative approaches.

In GEF-4 and GEF-5, projects geared toward private sector engagement tended to use set-aside funding and included nongrant instruments to address important barriers to private sector engagement. More recently, in GEF-6, the integrated approach pilots explicitly provide for engagement with the private sector, while the \$110 million nongrant pilot program maintains momentum for public and private recipients to use innovative financing models. A more holistic and comprehensive approach was also envisioned in GEF-6 to mainstream private sector engagement across all GEF focal area strategies. The GEF Independent Evaluation Office presents this evaluation as part of its Sixth Comprehensive Evaluation of the GEF (OPS6) in advance of negotiations for the GEF-7 replenishment. The aim of this study is to provide insights for the GEF partnership to more effectively leverage the potential of private sector investment and commitment toward sustainable practices as well as provide insights into the demand, the offer, and potential gaps around environmental finance. Understanding the GEF's niche and comparative advantages in this domain is a particular objective of this study. This report specifically provides

- An analysis of the drivers for the private sector to address environmental issues, the environmental finance landscape, and the hurdles faced by different actors in the environmental finance market;

- An assessment of the GEF's private sector engagement activities around environmental finance; and
- Conclusions on the role for the GEF, instruments, and tangible measures that the GEF could incorporate in GEF-7, taking into account the GEF's strategy, current market demand, and existing peer offerings.

The evaluation took a mixed-methods approach encompassing qualitative and quantitative data gathering and analysis. Its inputs included stakeholder surveys, desktop research, a portfolio review, and a multifaceted analysis of the environmental finance landscape. The study was limited in its ability to develop an accurate portfolio of projects that engage the private sector, given the systematic inability to isolate projects from the GEF's Project Management Information System.

Evolving landscape for environmental finance

In recent years, new opportunities for and drivers of collaboration with the private sector to address environmental degradation have emerged, including public and private efforts to address climate change; the adoption of the Sustainable Development Goals; the emergence of cost-competitive clean energy technologies; the rise of impact investing and conservation finance; and environmental and sustainability consciousness across the corporate, finance, and investor communities.

The semipublic and public environmental finance field in which the GEF operates is now a complex arena made up of a variety of actors with diverse fund offerings in terms of instruments and environmental themes. Among public and semipublic environmental finance funds, the Green Climate Fund (GCF) and, to a slightly lesser degree, the Clean Technology Fund, part of the Climate

Investment Funds (CIF), are the GEF's main peers: all three mechanisms are the largest in the field and comparable in terms of focus and accessibility. Few funds in this niche successfully combine a broad instrumental and thematic focus with easy access for the private sector. The GCF and the CIF are both multibillion-dollar funds with mandates to leverage private finance and stimulate market development for climate change finance. Both have made private sector co-investment a central strategic focus but are still working to refine their niche.

Private sector views of the GEF

A survey of private sector stakeholders revealed drivers for their engagement in activities that generate environmental benefits. These include natural capital depletion and diminishing availability of resources needed for operational inputs. Societal expectations of companies are also changing, with investors and consumers demanding more transparency and adherence to global standards. Financiers are assessing portfolios through an environmental degradation and climate change lens, seeking to avoid stranded assets and directing flows to opportunities provided by the transition to low-carbon, climate-resilient economies.

Private sector stakeholders also shared challenges to greater participation in environmental activities and finance. An inconsistent regulatory environment was broadly recognized as hampering greater engagement. Policies that create pricing or payments for environmental benefits can accelerate investment opportunities. The inability to replicate or scale up environmental solutions was also cited as an impediment. Because many environmental finance opportunities are small or dissimilar, they are difficult to aggregate or expand, creating limitations for financial intermediaries. Many companies also

lack a track record of working in environmental markets, which, when combined with a conservative risk perspective, means potential green investment opportunities are not pursued. Finally, high transaction costs are particularly an issue for companies that are faced with the challenges of poor infrastructure and limited ability of customers to pay for green services and goods.

To build on the drivers for engagement and address the challenges, respondents also shared a number of strengths and weaknesses of the GEF's private sector engagement. In terms of comparative advantages, first, the GEF has a range of flexible financing instruments and a broad thematic niche extending beyond climate change to other environmental demands. Second, it has a greater appetite for high-risk, early stage, and smaller projects than do the CIF, the GCF, and most other large development finance institutions (such as multilateral development banks). Third, the GEF's track record includes broad global experience, knowledge, and reach; the GEF possesses valuable experience with technical assistance, capacity building, and policy-enabling environments necessary to generate deal flow for larger public and private funds alike. Lastly, the GEF is seen as having a strong brand and convening power among several networks, giving it a strategic opportunity to pursue multistakeholder alliances engaging various private sector actors.

The GEF is also perceived as having weak outreach to the private sector, and the specifics of its work are not well known, even among a number of its nominal partners. Its funding mechanisms are generally believed to be inaccessible and bureaucratic. These learnings reinforce earlier findings that suggest the GEF still has much room to improve its private sector engagement, and could benefit from better strategic targeting and upstream planning to ensure it can overcome

its internal obstacles in seeking to mobilize resources and support from private sector actors.

GEF private sector intervention models

A review of GEF-5 and GEF-6 projects to assess the five intervention models used by the GEF to engage with private sector actors revealed that the majority of projects (79 percent) relied on more than one model to address the barriers faced by the private sector in environmental protection. The most commonly applied model was strengthening institutional capacity and transforming policy and regulatory environments. These are critical elements to help build capacity and put in place the right incentives and signals that allow the private sector to (re)direct its investment in an environmentally sustainable manner.

Concerning nongrants, the GEF uses a broad spectrum of tools that fall into three broad types of financial instruments: loans, including hard loans, concessional loans, contingent loans, and revolving funds; guarantees and risk mitigation, such as credit, risk, or performance guarantees; and equity investment, either through direct participation in a company or through a fund. Most projects reviewed for this report used a combination of these tools, and also included technical assistance and capacity-building components generally provided on a grant basis.

The GEF has used these instruments and models to work with private sector actors ranging from smallholders to multinational companies.

Portfolio review of private sector engagement

The GEF Independent Evaluation Office conducted a portfolio review of all projects engaging

the private sector, including nongrant projects. Together, these 460 projects represent \$2.499 billion in GEF grant investment. These projects included 91 projects that have used nongrant instruments.

COFINANCING

For the private sector portfolio, on average, every GEF grant dollar leverages \$8 in cofinancing. If the nongrant projects, which have high cofinancing (every GEF grant dollar leverages \$10), are removed from the overall portfolio, the ratio is 1 to 7, with every GEF grant dollar leveraging \$7 in cofinancing. For the overall private sector portfolio, \$3 out of \$8 in cofinancing comes from private sector investment, mostly in the form of equity (41 percent). This number decreases to \$2 out of \$8 if nongrant projects are taken out of the private sector portfolio. Leverage ratios and absolute amounts of cofinancing rose in GEF-5 and continued to grow in GEF-6, suggesting that cofinancing from the private sector, catalyzed in large part by PPPs and nongrant instruments, is increasingly strong.

EVOLVING FOCAL AREA CONCENTRATION

Projects in the climate change focal area account for the bulk of the private sector portfolio, both by number of projects (68 percent) and GEF investment volume (62 percent). Overall, biodiversity is the second most populated focal area (13 percent). Multifocal area investments increased dramatically in GEF-6, making it the second largest area of investment (18 percent). In GEF-6, chemicals and waste also featured prominently. A similar trend is also observed with the nongrant portfolio, with the bulk of projects in the climate change focal area (79 percent) and increasing diversification in GEF-6.

STRONG PERFORMANCE

The private sector grant, nongrant, and overall GEF portfolios have comparable levels of performance, with around 80 percent of the private sector portfolio and the general portfolio evaluated as moderately satisfactory or above on project outcomes. No global projects or projects in Europe and Central Asia are rated as unsatisfactory or below, indicating stability and solid performance in these regions. On the other hand, 35 percent of African projects have moderately unsatisfactory or below ratings, the highest percentage in this category among all regions.

EVOLVING NONGRANT INSTRUMENTS

Loans and guarantees were the most commonly encountered nongrant financing vehicles. In the completed projects sample, only three involved equity investment. Equity investments appear more frequently among the newer projects approved. In some cases, the GEF financing was akin to a capital grant to fund demonstration projects or provide initial capitalization of a fund. Revolving funds, involving “seeding” a facility with funds that are then provided for eligible activities, are also popular.

In 2008 (GEF-4), the GEF created the Earth Fund, itself a pilot PPP initiative with \$50 million of GEF resources plus another \$6 million to cover Agency fees. This private sector set-aside was based on the concept of Council-approved platforms with delegated authority for individual projects to be approved by the relevant implementing Agencies within their funding envelopes. For example, the International Finance Corporation’s Earth Fund Platform was allocated \$30 million, of which 25 percent could be used for technical assistance/advisory services. The Earth Fund had a separate advisory board; it was globally and sectorally flexible, and its funding could be fully

subordinated as needed. The Earth Fund's commercial cofinancing exceeded \$1 billion.

Created in GEF-5, the GEF Public-Private Partnership involves a private sector set-aside of \$80 million for the July 1, 2010–June 30, 2014, period. It prioritizes partnerships with the private sector with a focus on the expanded use of nongrant instruments, such as loans and equity investments. Five projects are classified as PPPs in the portfolio, for total GEF financing of \$70 million and cofinancing of over \$900 million. These projects are still ongoing.

For the GEF-6 nongrant pilot, the GEF invested in 10 projects amounting to \$91.2 million (out of an envelope of \$110 million). The equity instrument features more prominently and is generally in the form of participation in a fund. There are two unusual features that can be observed in the GEF-6 batch of projects compared to previous ones: *pari passu* structures that place the GEF on equal footing with co-investors and a broad proliferation of financial instruments, including mezzanine structures, with quasi-equity upsides; unique equity opportunities; and senior, subordinated, and other tailored debt instruments. A noteworthy development is the new GEF Agencies, such as the Development Bank of South Africa and Conservation International, that have partnered with the GEF for the first time on nongrant projects and some traditional ones that do not feature in the portfolio. Both GEF-5 and GEF-6 nongrant instrument projects anticipate reflows to the GEF.

Going forward

The survey with private sector stakeholders and portfolio research highlighted areas of limitation and suggested that the GEF partnership should consider focusing its private sector engagement efforts where it is most likely to succeed.

These areas include larger initiatives where the GEF can dedicate more effort per dollar spent; high-impact thematic or sectoral activities where the GEF's value added in the eyes of the private sector is significant; and arenas where the GEF's comparative advantage is greatest, such as convening and alliance building, early stage risk capital deployment, and improvement of policy and capacity to enhance investment-enabling environments. At the same time, stakeholders have identified areas for improvement, such as a clear definition of the GEF's offerings to the private sector, addressing challenges with time cycles, and accessible processes. The GEF also has demonstrated comparative advantage working on cross-cutting approaches in a wide range of non-climate change conservation domains and can help encourage private sector activity in these areas.

Conclusions

Conclusion 1: The GEF engages with a wide variety of for-profit entities that vary in their industry focus, size, and approach to environmental issues using a mix of intervention models. The range extends in size from multinational corporations; through large domestic firms and financial institutions; to micro, small, and medium enterprises and smallholders/individuals. Because GEF projects are designed to address complex issues, an assortment of intervention models are needed to address the assortment of barriers to environmental protection. Among the intervention models, the most commonly applied ones are those that facilitate institutional strengthening and those that transform policy and regulatory environments. These are areas of comparative advantage for the GEF. Lack of regulatory frameworks and environmental policies can impede in-country compliance with standards and affect the achievement of global environmental benefits,

while creation of supportive conditions is a factor in successful private sector participation.

The GEF's private sector activities overall can thus be broadly considered as "upstream" in the development continuum—to create and nurture the necessary ecosystem for private sector engagement. However, this is potentially at odds with a push for greater financial self-sufficiency, which emphasizes reflows and financial structures that provide a financial return to the GEF. Indeed, the GEF appears to be drifting more "downstream," even structuring its nongrant instrument on an equal footing with other investors in some recent cases.

Conclusion 2: The GEF is constrained in its engagement with the private sector because of operational restrictions. The GEF's ability to engage the private sector diminished during GEF-4 as a result of the then-introduced Resource Allocation Framework (RAF). For many operational focal points and countries, this was a shift toward empowering them to program GEF support to the country. Consequently, private sector set-asides have been a primary modality through which engagement has continued, first with the Earth Fund platform and then with the PPP platform in GEF-5 and the nongrant pilot in GEF-6. The fragmented nature of these interventions, combined with the limits of the System for Transparent Allocation of Resources (STAR), often means that private sector innovation is not easily reconciled with country ownership and national strategies and priorities.

Conclusion 3: It is difficult to systematically gather evidence on elements of the GEF's private sector activities without improvements to the GEF Project Management Information System. GEF projects that have an element of private sector engagement are not easily retrieved from the organizational database. This lack of

systematic "tagging" of those projects was raised by the Independent Evaluation Office in the Fifth Overall Performance Study on private sector engagement. The inability to generate accurate project data persists. Moreover, the quality of the information about private sector engagement contained in terminal evaluations is extremely variable. A significant shortcoming is the scant attention paid in most nongrant project terminal evaluations to financial information about the project.

Conclusion 4: GEF investments involving private sector engagement have higher cofinancing. In particular, the private sector portfolio is catalyzing private investment. Every dollar from a GEF grant leverages \$8 in cofinancing, compared to \$6 in cofinancing estimated for the overall GEF portfolio. Three of every eight dollars in cofinancing come from private sector investments, mostly in the form of equity investment. The leverage ratio has been steadily increasing since GEF-1 (with the exception of GEF-4). In GEF-5, for every dollar spent by the GEF, \$11 in cofinancing was received for private sector projects by other parties (including private sector parties).

By stimulating markets and reducing risk, nongrant projects have resulted in high cofinancing leverage ratios. On average, every GEF grant dollar spent for nongrant projects leverages \$10 in cofinancing. Not only is the overall leverage ratio highest among the private sector portfolio, but it is also highest among the general GEF portfolio. Notably, this ratio has improved greatly in GEF-5 and GEF-6. For every \$10 leveraged by GEF nongrant, \$5 comes from private sector investments.

Conclusion 5: Climate change projects feature heavily in the private sector portfolio. Two-thirds of the projects in the portfolio are in the climate change focal area, amounting to 62 percent of the GEF's total investment in private sector projects.

Furthermore, the majority of the nongrant projects concern climate change. This focus on climate reflects the significant global effort that has gone into creating conducive policy and regulatory environments that would facilitate private activity in the climate change arena. In GEF-6, chemicals and waste, a differentiated focal area, was added. Sixteen chemicals and waste projects, representing 17 percent of private sector portfolio projects and 15 percent in terms of investment in this period, are being implemented. While all focal areas have consistently identified the private sector in their strategies, it was considerably easier to locate examples of engagement from the climate change and biodiversity focal areas than it was to find project examples for international waters and land degradation (excluding projects concerning smallholders). These signals of low involvement within a portfolio known to have engaged the private sector indicate a need for more comprehensive collection of information and documentation on engagement with the private sector.

Conclusion 6: There are several players in the climate finance space, but few in the other convention areas covered by the GEF. In comparison to climate change, the other convention areas have limited private sector activity in present-day challenge areas such as water scarcity and food security affecting vulnerable populations. Though the low levels of activity impede the GEF's ability to structure nongrant projects in these areas with significant reflows and returns, the earlier stage of development is an opportunity to focus and develop the upstream environments needed to enable private sector participation and thereby grow new environmental markets. The GEF has the flexibility and thematic breadth to employ cross-cutting approaches and to work in a wide range of environmental finance and conservation domains. Among nongrant projects in GEF-5 and

GEF-6, there is a relative increase in non-climate change projects. Particularly, the GEF-6 projects show greater diversity in the sectors covered, with an increased focus on biodiversity and land degradation.

Conclusion 7: The range of nongrant instruments employed by the GEF is needed to target specific environmental market failures. Many of the barriers to private sector investment have not fundamentally changed in the 20-plus years covered by the sample projects. Justification for the GEF nongrant financing still includes limited availability of capital; limited appetite on the part of commercial banks; and lack of familiarity with the sectors, financing modalities, and instruments.

Technical assistance plays a significant role in most nongrant projects, and it is often integrated into the financing structure or mechanism. The GEF has a long history of and experience with providing technical assistance and capacity building. These are necessary adjuncts to investment support, and a clear niche for the GEF when acting in conjunction with other financiers. The GEF also appears to have a greater risk appetite and tolerance than other financiers, as evidenced by its willingness to take first-loss positions and assume the highest risk in a financing plan. This can play a vital role in unlocking other sources of finance and, together with technical assistance, has catalyzed systemic shifts in climate change mitigation. Alongside technical assistance and capacity building, the nongrant instrument can lend itself to a variety of structuring to address some subset or combination of these barriers.

Conclusion 8: There has been an evolution in the use of the nongrant instrument toward more systematic reflows and a more explicit requirement for returns. Nongrant projects in earlier cycles were structured to recover principal at

best. In later cycles, there was an expectation of a positive financial return. To date, \$8.2 million in reflows has been received. GEF-5 and GEF-6 projects have not yet begun generating reflows, and the long time frames involved in the sorts of activities financed means that reflows would be generated 10–20 years into the future. Projected reflows in GEF-5 and GEF-6 seem optimistic, particularly in light of GEF experience, which suggests that many nongrant projects set overly ambitious targets for implementation results. It should also be noted that there are trade-offs with returns and reflows based on the development phase of the activity being financed. If used in the context of more upstream activities, then instruments will need to focus more on concessionality, which will sacrifice returns and reflows. For more downstream activities, such as in early stage and new concept projects, the GEF could expand the use of the nongrant instrument, with potential for greater returns and reflows.

Conclusion 9: GEF country clients and private sector stakeholders each lack awareness of the opportunities for engagement with one another.

As reported through the online survey, the GEF's position, processes, and role are insufficiently clear to the private sector. Similarly, GEF recipients have varying degrees of knowledge of the role of the private sector in green finance and accessing funds beyond the usual GEF grant instruments. Private sector respondents find it difficult to obtain information on the GEF's private sector engagement and the role of Agencies and

opportunities for cooperation. Additionally, nearly all stakeholder respondents mentioned that the approval process of the GEF is too slow and complex. This causes uncertainty and deters potential private sector partners from working with the GEF. Private sector respondents expect more clarity to help them better prepare for cooperation with the GEF.

Recommendations

1. The GEF can address operational restrictions to private sector engagement through pursuit of a private sector window.
2. The GEF should encourage policy and regulatory reform for its cascade effect on private sector environmental investments.
3. Intensify efforts to develop a broader strategy for private sector engagement beyond climate change.
4. Improve outreach to GEF recipients of funds, GEF Agencies, and private sector entities.
5. Dedicate appropriate resources to tracking, monitoring, and evaluation of the private sector portfolio by improving tagging and retrieval capabilities of the PMIS database.

1: Introduction and background

To execute its mission of tackling the planet's biggest environmental issues, the Global Environmental Facility (GEF) works with a wide range of partners. These partners include public bodies, partner agencies, civil society organizations, and private sector actors. The GEF's engagement and support for projects has been predominantly geared toward the public sector, but with increasing recognition of the role of the private sector in delivering environmental and social improvements, the GEF continues to address cross-cutting environmental issues and leverage private sector resources. The GEF distinguishes three groups of private sector actors: capital providers (pension funds, venture capital funds, etc.), financial intermediaries (investment banks, commercial banks, financial advisory services, etc.), and industry players (large corporations, small and medium enterprises (SMEs), and individuals/entrepreneurs).

Initial efforts to involve the private sector in GEF operations were undertaken early in GEF's pilot phase (GEF 1995). Thereafter, the GEF Council approved a strategy in 1996 which identified the "removal of market, information and other barriers" as the key approach to engage the private sector (GEF 1996, 5). The focus shifted from removing market barriers to nongrant instruments during GEF-2. In 1999, the GEF released the policy paper "Engaging the Private Sector in GEF Activities" (GEF 1999). This paper underlined the importance of the private sector and identified

several modalities that would be needed for barrier removal, including technical assistance and a range of nongrant financing modalities.

The tools for private sector engagement were formalized during GEF-3. The following replenishment periods were characterized by a focus on partnerships and platforms (GEF-4) and technology and innovation (GEF-5). The GEF proposed a Public-Private Partnership (PPP) Fund in 2005, and set aside \$50 million to create the GEF Earth Fund with delegated authority to the International Finance Corporation (IFC) and other agencies to more quickly prepare and approve projects in line with private sector expectations. Under the IFC platform, 14 projects were supported (5 investment services and 9 advisory services projects).

During the latter stages of GEF-5, significant efforts were undertaken to redefine a strategy for enhancing public-private partnerships (GEF 2011b). The GEF developed a new strategy paper, "Revised Strategy for Enhanced Engagement with the Private Sector," to increase private sector engagement (GEF 2011a). This strategy prioritizes the expanded use of nongrant instruments as a key tool available to the GEF for building public-private partnerships, also using a multilateral development bank (MDB) platform approach to attract greater private sector financing.

Building on the GEF-5 operational approach, three priorities were identified for expanding private sector engagement in GEF-6: mainstreaming

private sector engagement in all GEF projects; setting aside \$110 million for a nongrant pilot program which funds proposals that have the potential of generating reflows; and making the private sector integral to design, development, and implementation of three integrated approach pilots (IAPs) that are featured in GEF-6 and that are at midcourse.

With GEF-6 having been under way for a few years now and to be succeeded by GEF-7 in 2018, the GEF Independent Evaluation Office (IEO) undertook a study of the results of private sector engagement, including an in-depth examination of the GEF's nongrant projects. The nongrant instruments are by definition expected to generate financial returns and, therefore, are most likely to be deployed in the context of private sector engagement. This study includes an assessment of the GEF's private sector portfolio and provides guidance and suggestions for future private sector engagement.

1.1 Evaluation objectives

The aim of this study is to provide insight for the GEF to more effectively leverage the potential of private sector investment and commitment toward sustainable practices as well as insight into the demand, the offer, and potential gaps around environmental finance. This report specifically provides

- An analysis of the drivers for the private sector to address environmental issues, the environmental finance landscape, and the hurdles faced by different actors in the environmental finance market;
- An assessment of the GEF's private sector engagement activities around environmental finance; and

- Recommendations for roles, instruments, and tangible measures that the GEF could incorporate into GEF-7, taking into account the GEF's strategy, current market demand, and existing peer offerings.

1.2 Methodology

The evaluation was undertaken by a team of GEF IEO staff and consultants and is based on desk research, portfolio analysis, online surveys, and interviews with relevant officeholders.

DESK RESEARCH

The documents reviewed include relevant Council documents, previous evaluations that contained analysis on the GEF's private sector engagement, and GEF project documents, including terminal evaluations. Additionally, external literature including leading reports on environmental finance from international organizations (the World Resources Institute, the G20, and United Nations [UN] bodies); specialized initiatives (e.g., the Climate Policy Initiative, the Climate Bonds Initiative); and research by MDBs, commercial banks, and consultancy firms were considered. A list of documents used is presented in the bibliography.

PORTFOLIO ANALYSIS

A complete portfolio of 460 GEF projects, including 91 nongrant projects, was analyzed for trends. For portfolio development, "engagement of the private sector" is interpreted broadly by and within the GEF partnership to extend from engagement with capital providers and financial intermediaries to direct financing for enterprises to regulatory changes in support of environmentally friendly market reforms.

The evidence presented in this portfolio analysis draws on two interrelated sources. The first is the project data pulled from the GEF's Project Management Information System that was used as a starting point for developing the portfolio. Projects that are indicated as receiving private sector cofinancing or executed by private sector actors were included in the initial list. Project documents associated with the initial list of projects were also reviewed to ensure the integrity of the list.

The second source is the GEF IEO's internal project performance database (Terminal Evaluation Review Database), which contains ratings on outcomes for projects that have been evaluated through the Office's annual performance reports. Of the 460 private sector projects identified, 140 are also included in the IEO's Terminal Evaluation Review Database, with 123 projects having ratings on project outcomes. Using this information on project performance, the study compared the relative performance of projects that engaged the private sector with that of projects that did not along the dimensions of outcome quality, likelihood of sustainability, and relative efficiency.

An additional in-depth desk review was conducted for 58 projects for which terminal evaluation review data is available. These were selected on the basis of their receipt in the GEF-5 and GEF-6 periods. One of the terminal evaluations reviewed was for the IFC Earth Fund Platform (GEF ID 4257), which took a programmatic approach and included 14 subprojects. Overall, 17 of the projects with terminal evaluations are from GEF-4; 2 are from GEF-5. The remainder are from earlier GEF phases. A review instrument (see [annex A](#)) was designed to assess the extent of documented private sector engagement through questions about the number and variety of private sector entities identified in the terminal evaluation report as well as questions on the roles these entities played in the projects. The desk review also

identified nongrant financial structures, cofinancing contributions, the variety of mechanisms used to target the private sector, and the types of lessons learned from private sector projects. A full list of the projects included in the analysis is presented in [annex B](#).

ONLINE SURVEYS

In order to better understand the drivers and hurdles for private sector actors pursuing activities that generate environmental benefits, an online survey was designed that targeted six GEF stakeholder groups, of which three were private sector stakeholders (external stakeholders) and three were involved in GEF private sector engagement (internal stakeholders). The three external stakeholder groups consisted of private sector companies, financial institutions, and network organizations. The three internal stakeholder groups consisted of GEF Secretariat staff members involved in private sector engagement, GEF Agencies, and national focal points. The contact list for external GEF stakeholders was compiled by the IEO and consultants to the study.

The surveys resulted in a total of 60 responses, 30 from private sector stakeholders (14 companies, 12 financial institutions, and 4 network organizations) and 30 from internal stakeholders (4 Secretariat staff members, 9 implementing agencies, and 17 national focal points). Throughout the report, survey findings are highlighted.

INTERVIEWS

In addition to the surveys, 22 in-depth interviews were conducted with the different stakeholder group representatives. One- to two-hour phone interviews were conducted with 14 private sector stakeholders and 5 GEF internal stakeholders as well as with representatives of the Green Climate Fund (GCF) and the Climate Investment Funds

(CIF). The GEF staff interviews included multiple conversations with the GEF private sector lead and an interview with the GEF Chief Executive Officer (CEO). A list of survey participants and interviewees is provided in [annex C](#).

LIMITATIONS

The study relies on triangulation of evidence from quantitative and qualitative sources; there are, however, some limitations. The portfolio analysis relies on the GEF Project Management Information System (PMIS) database to explore GEF engagement with the private sector. The PMIS, however, still does not allow for systematic “tagging” of projects that engage the private sector, be it partnerships with and outreach to the private sector during stakeholder consultation, support for innovative technologies, or support for regulatory changes in support of market reforms. While individual focal areas may have their own lists of projects that involve the private sector and the nongrant projects have been more systematically tracked, it is not possible to retrieve this information from organizational databases. Furthermore, “engagement with the private sector” can be and

is interpreted broadly within the GEF partnership. This results in too general an approach that is not representative of a focused set of projects but may also result in missing other projects that are not readily tagged as part of the private sector portfolio. Hence, the list of projects in the portfolio is not exhaustive.

To ensure the inclusion of as comprehensive a portfolio as possible, the IEO did a systematic review of project titles, cofinanciers, executing agencies, and project descriptions as well as a review of lists provided by focal area officers and, in some cases, a review of project documents.

It should also be noted that the online survey respondents were drawn from a known universe of private sector stakeholders, all of which had some experiences with the GEF, in order to get informed viewpoints. Hence, they provide important insights from knowledgeable and carefully selected samples.

2: Private sector engagement in the changing landscape of environmental finance

The GEF today is operating in a very different environment than when it first started. It is no longer the only multilateral purveyor of environmental finance, which is now a burgeoning field that has developed quickly over the last 25 years, tracking the history of the GEF itself. A thorough understanding of the GEF's position vis-à-vis private sector actors within the environmental finance landscape is the basis for researching how the GEF can best leverage the private sector in tackling environmental issues. This chapter provides an overview of the market/structure, its actors, and financial instruments. Additional attention is paid to the role of (semi) public environmental finance actors and financial instruments that are specifically suited to the environmental finance market.

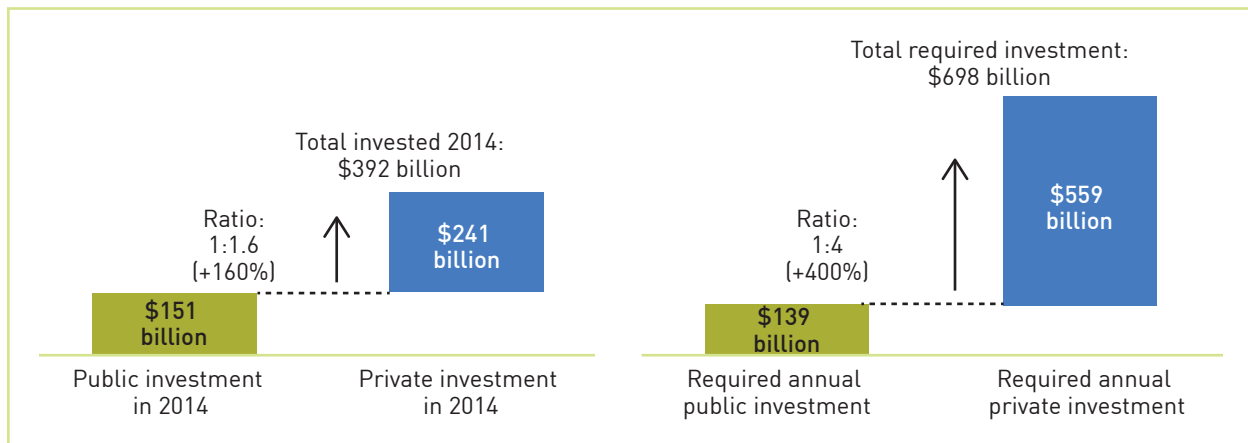
2.1 Why private sector engagement is crucial for the GEF

While the public sector has a vital role to play in the transition to sustainable economic growth, the private sector also plays a substantial role in this space and provides the bulk of the financing for solutions to global environmental challenges. The fundamental role of the private sector is exemplified by its current and future role in environmental finance. The Climate Policy Initiative calculated that, of the \$392 billion global investments in environmental finance in 2014, 61 percent (\$241 billion) was provided by the private sector (figure 2.1). Moreover, of the remaining

\$151 billion in public sector climate financing, an estimated 33 percent went to private sector entities.

Looking ahead, the role of the private sector in environmental finance is expected to become even larger. Achieving the ambitious Sustainable Development Goals (SDGs) will cost a lot of money. The total will be far more than governments can make available. For example, according to the World Economic Forum (2013), an annual \$700 billion investment is required up to 2020 for investment in clean energy infrastructure, low-carbon transport, energy efficiency, and forestry to limit the global average temperature increase to below 2°C above pre-industrial levels. The Climate Policy Initiative estimates that this annual amount needs to further increase, estimating total required investments over the next 15 years at \$16.5 trillion. As public funding is expected to remain stagnant, additional investments should come from the private sector.

While these required additional investment amounts seem staggering, the capital is available. Global capital markets are currently estimated at \$218 trillion. Moreover, individual investors; commercial banks; and larger institutional investors like pension funds, insurance companies, and sovereign wealth funds are all increasingly interested in combining their capital with some form of environmental or societal return. The principles underlying private sector participation

FIGURE 2.1 Potential public-private climate finance mobilization to close cost gap

SOURCES: CPI 2015; World Economic Forum 2014.

are anchored in all the SDG targets, including Target 17, on strengthening global partnerships for sustainable development. The launch of a new UN platform with the private sector in 2016 for scaling up innovative financial solutions for the SDGs is another example of pathways forward for transformation of global capital markets. Similarly, guidance for companies such as those developed by the Global Reporting Initiative, Global Compact, and World Business Council on Sustainable Development (GRI, UN Global Compact, and WBCSD 2015) on how to align private strategies as well as measure and manage contributions to the SDGs seek to help mobilize private sector efforts around the goals.

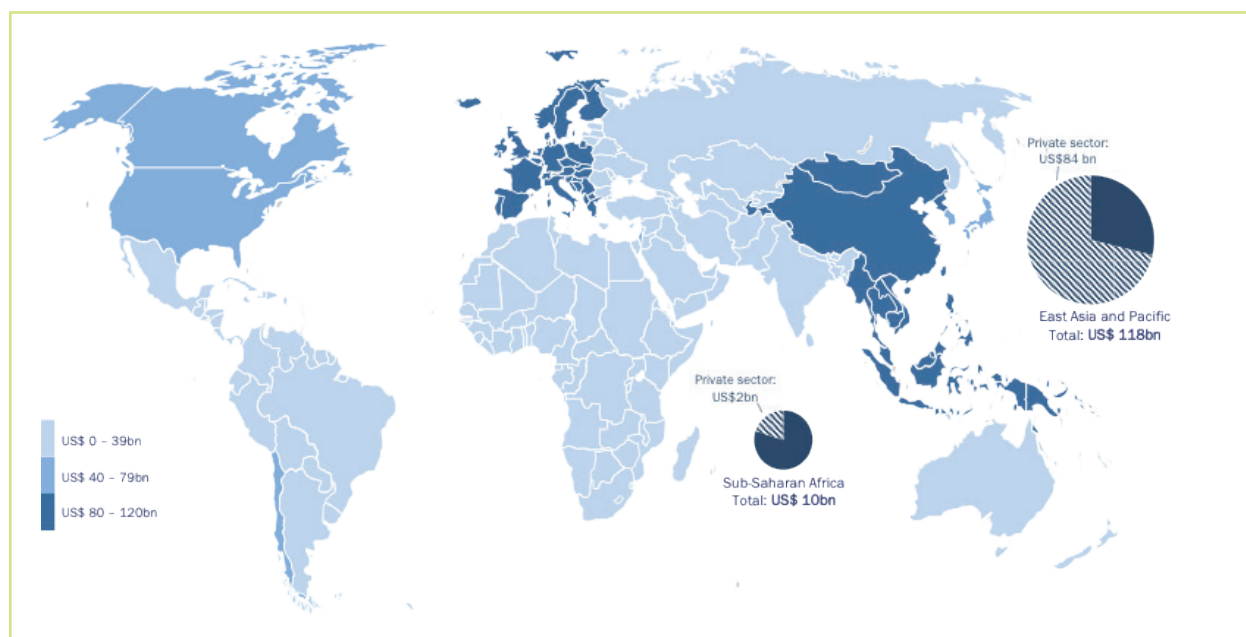
Another encouraging sign is that over the past few years, financial institutions have increased their capacity and capability to provide financial services to climate change mitigation measures initiated by the private sector. A number of innovative new financial products, instruments, and asset classes that can be labeled “green financing” have been introduced into the market. Examples include green bonds, clean energy investment funds, and sustainable forestry

investment ([annex D](#) focuses on these innovative instruments). In addition, investment analysis and risk management improved with the integration of environmental, social, and governance factors into investment decision-making.

At the same time, when looking at the distribution of green financing to geographies (in this case limited to climate finance for consistency and comparability), it is apparent that the finance flows are predominantly directed toward developed countries (figure 2.2), while the developing countries need it the most, as these countries are generally less resilient to climate change than their developed counterparts (figure 2.3).

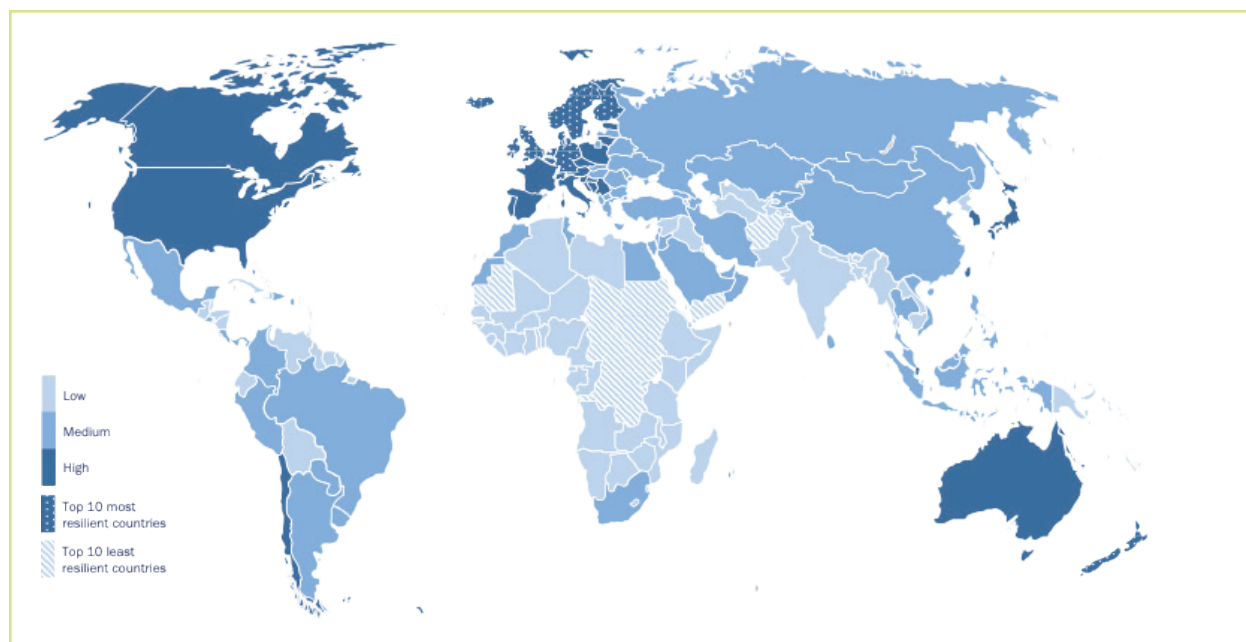
The distribution of climate finance in 2014 was primarily concentrated in North America, Western Europe, and East Asia, receiving 66 percent of global climate finance. In contrast, only 9 percent of climate finance flowed toward Africa, South Asia, and the Middle East. Moreover, the portion of private sector climate financing for environmental solutions is significantly higher in countries that are better equipped to adapt to climate change. Whereas the percentage of private sector finance as part of total climate

FIGURE 2.2 Global climate finance flows, public and private, by destination: 2014



SOURCE: CPI 2015.

FIGURE 2.3 Global climate change adaptation assessment: 2014

SOURCE: Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index, <http://index.gain.org/>.

NOTE: Vulnerability measures a country's exposure, sensitivity, and capacity to adapt to the negative effects of climate change across six life-supporting sectors: food, water, health, ecosystem service, human habitat, and infrastructure.

finance flows was 90 percent in North America and 71 percent in East Asia,¹ it only constituted 36 percent in South Asia and 20 percent in Africa. This means that there is great need for redirecting overall climate finance flows, and in particular private sector financing flows, to those countries with a greater need for adaptation solutions.

Current investment in less mature conservation finance markets is even more skewed toward developed countries, particularly North America: From 2004 to 2015, one study found, roughly one-third of nongovernment market investments in global sustainable food and fiber production, and more than 80 percent of both water quality and habitat conservation investment, targeted North America, despite acute needs in developing countries worldwide (Hamrick 2016).

In sum, although global climate finance increases by the year, there remains a significant gap between the current level of environmental investments and the required amount—particularly in developing countries. Further unlocking private finance for environmental projects and infrastructure is therefore key in the transition toward sustainable economic growth. However, financing for projects and infrastructure is constrained by limits in public financing and policy and market uncertainty. Legacy fiscal measures such as fossil-fuel subsidies combine with the steady but slow progress of international environmental negotiations that weaken incentives for green investment, and when combined with a lack of awareness of private finance providers of green growth opportunities, progress is restricted.

¹ In developed countries and emerging markets, private sector finance totaled \$210 billion, and in developing countries \$23 billion. In North America private sector finance as a percentage of the total was 90 percent, in Western Europe 47 percent, in Japan, Korea, and Israel it made up 93 percent, and in Australia and New Zealand 95 percent.

To encourage private investment, development finance institutions must focus on systematically de-risking countries moving toward commercial viability. The GEF can play an important role in this transition, as it has much-needed instruments in its toolbox. These instruments include regulatory or policy reforms to make projects commercially viable, targeted financing, support for institutional arrangements that blend private and public interests, technical expertise, and instruments that can reduce risk and address bottlenecks preventing private investment.

2.2 Main drivers of private sector engagement

In order to leverage the private sector in tackling environmental issues, the GEF needs to understand what the drivers are for private sector actors to pursue activities that generate environmental benefits. This insight can then frame for the GEF which instruments it can best deploy to meet private sector needs. The desk research and in-depth interviews have identified the following three main factors that drive this change for private sector investments.

NATURAL RESOURCE SCARCITY AND LOSSES BECAUSE OF ENVIRONMENTAL DAMAGE

Extreme weather events, natural capital depletion, and the diminishing availability of water are a few of the risks that pose a threat to the core operations and activities of both private sector companies and financial institutions, regardless of geography or sector.

Companies face rising costs, which result from a growing scarcity of operational inputs and increasing damage done to physical assets. The increasing scarcity of water is already leading to competition between businesses and society. Limited access to water for the agriculture sector

means decreased productivity and thus business losses. In addition to rising costs, some sectors, such as tourism and real estate, are dependent on natural resources to such an extent that they are concerned about stranded assets.

The respondents to the online survey of the GEF's private sector stakeholders recognize that environmental issues (as per the GEF focal areas) are important on a global scale, although the extent to which these affect their business varies (figure 2.4).

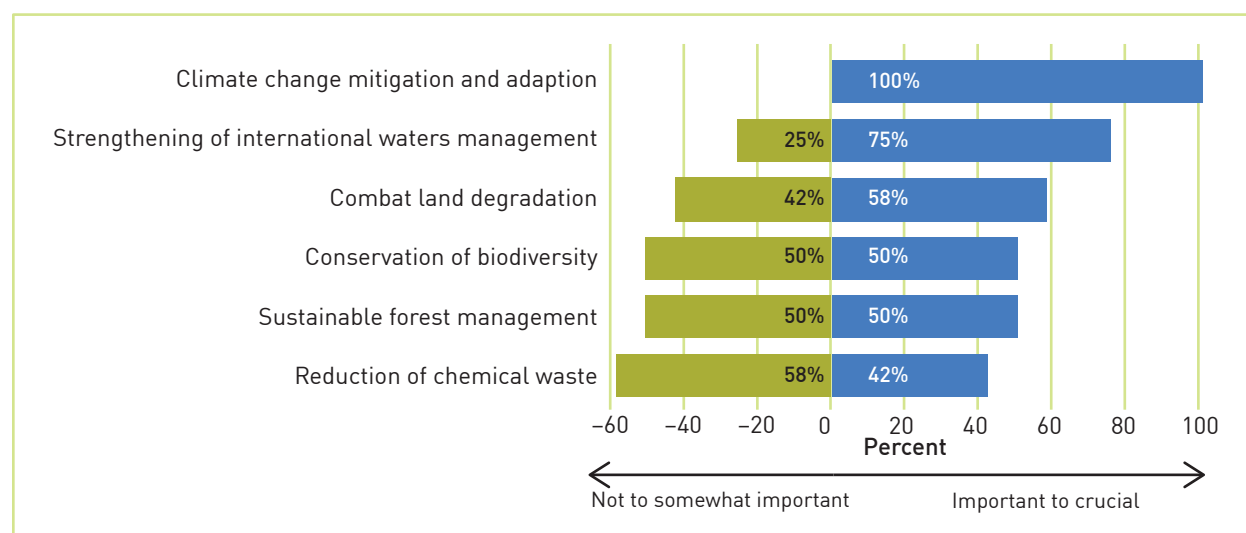
Responses indicate that the companies surveyed are primarily focused on climate change, which is often seen as the overarching theme for other environmental themes, notably land degradation, biodiversity, and sustainable forest management. Many respondents credited the Conference of the Parties (COP) 21 in Paris for placing climate change even more firmly on the corporate agenda. Water management is also considered highly important, as it is a fundamental resource in production processes as well as crucial in transport and trade. The reduction of harmful

chemicals and waste is perceived to be less directly relevant to the surveyed private sector's core business. The topic has been on the corporate agenda for longer and is being addressed by companies and regulators (e.g., the EU regulation on Registration, Evaluation, Authorization, and Restriction of Chemicals [REACH]) alike. Subsequently, the issue has matured over time and is no longer perceived as a directly pressing risk or opportunity.

SOCIETAL EXPECTATIONS

In addition to the scarcity risk, there is a societal trend at play wherein norms and stakeholders' expectations are shifting. Investors demand transparency and adherence to global standards; nongovernmental organizations (NGOs) want accountability; and consumers have expectations of companies' corporate social responsibility commitments. An increased consumer interest in sustainability also presents an opportunity for companies to develop "green" products that cater to that consumer interest. On top of this,

FIGURE 2.4 Importance of environmental issues to companies' core business



SOURCE: GEF Project Management Information System.

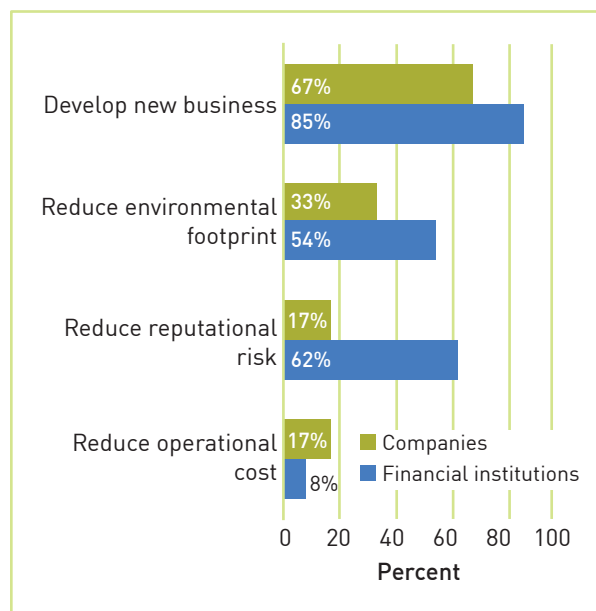
governments push the private sector with regulatory and fiscal incentives to make their production cleaner. In response to and in anticipation of more stringent regulations, companies are looking for more efficient and cheaper production methods. American food company General Mills has saved \$350 million in costs as a result of reducing its carbon footprint by 21 percent by generating clean energy from oat hulls (the waste from its production of oat flour).

FINANCING REQUIREMENTS AND OPPORTUNITIES

Although most of the large-scale impacts of environmental degradation and climate change are expected to materialize in the second half of this century, the financial sector is already taking action to anticipate potential stranded assets in portfolios because of environmental degradation and climate change. A first measure this sector takes is to use its leverage as a financier to engage with investees and influence the company's policies and practices on the environment. Another option is to divest from a specific company or sector. The Norwegian Government Pension Fund (\$825 billion), for example, announced in 2016 that it would divest altogether from coal companies. Yet the sector is also increasingly aware of the opportunities provided by the transition to a low-carbon, climate-resilient economy. The financial sector is investing in the development of new products and services for its clients, as described in [annex D](#).

GEF stakeholders, and especially financial intermediaries, also cite developing new business as a key driver to develop new environmental products, services, and technology, as shown in figure 2.5. They see a strong opportunity in developing financial products for clean technology and resource efficiency. This is indicative of the

FIGURE 2.5 Drivers for private sector investment to address environmental issues



SOURCE: GEF Project Management Information System.

positive trend in private sector response to environmental challenges.

2.3 Challenges to private sector participation in environmental finance

Despite the above-mentioned motivators, the environmental finance market is still hampered by several hurdles that are holding the private sector back from achieving real scale and impact with its environmental projects and investments. The main actors in the environmental finance value chain (notably companies, financial intermediaries, and capital providers) experience these hurdles differently. Five hurdles are discussed here.

INCONSISTENT REGULATORY ENVIRONMENT

There is broad recognition among private sector players that inconsistent regulatory frameworks

hamper the environmental finance landscape. This is a particular issue in developing countries, where the need for environmental finance is higher and consistent government regulation is scarce. Government regulation can create investment opportunities and generate confidence among investors. Government regulations that clarify legal rights and rules and protect investors can reduce risk (often the case in developing countries). Policies that create pricing or payments for environmental benefits of investments can create monetary returns, as in the case of carbon pricing or ecosystem services pricing.

LIMITED REPLICATION AND SCALE

A key hurdle for environmental projects is that they lack the size required to access financing from the mainstream capital market, either directly or indirectly. Most environmental solutions are innovative and have a modest financing need that does not correspond with the large sums that mainstream investors seek to invest. Second, these solutions are often very specific to geographies and topics, which makes them difficult to replicate or scale. Because many environmental finance opportunities are small or dissimilar, they are difficult to aggregate or expand, creating difficulties for financial intermediaries seeking to offer mainstream investors in the capital market investments that meet those investors' demands for investment size and risk profile. This in turn creates a problem for large institutional investors. They do not have access to enough investment opportunities to match their environmental finance ambitions.

LACK OF TRACK RECORD

Many of the companies active in the field of environmental solutions are new. Either their technology is a new invention, their market is

unexplored, or the team running the operation is inexperienced. Although this is what makes them different and creative, it also makes them less attractive for financiers because they do not bring a long-standing history of proven business operations. This lack of track record deters mainstream financiers from committing, as they want to see proof of quality. The same problem holds up for new innovative financial intermediaries. They have similar trouble in raising capital when their target group, financial product, or team itself operates in unproven terrain.

CONSERVATIVE RISK PERSPECTIVE

Many investors still approach potential green investment opportunities with a traditional risk-return reference in mind. However, the projects often cannot meet the traditional return expectations until they have matured and the risks are lowered. Scenario analyses and risk assessments for green investments are still being developed, and investors thus have to rely on traditional and often unsuitable methodologies. For example, the returns of most projects do not fall within the traditional return-on-investment time frame of five to seven years. Because many environmental finance opportunities are novel, investors do not have access to extensive historical data, and making cross-sectoral comparisons in order to price risk is challenging and time-consuming.

HIGH TRANSACTION COSTS

Linking natural resources to revenue streams is the foundation of for-profit environmental solutions; yet this is a challenging exercise to many companies. The costs of developing innovative products are often high, and the rewards are often not immediate and apparent. High development costs are particularly an issue for

companies in developing countries, which are faced with challenges such as poor infrastructure and a lack of existing supply chains. For some private sector actors, the lack of expertise adds to their inability to effectively overcome this hurdle. Capital providers often lack the financial and human resources to dedicate to finding green investment funds that meet their risk and impact standards.

Many of these hurdles were identified by private sector stakeholders. During the interviews and online survey, the private sector respondents each saw a clear role for the GEF to play in overcoming these hurdles. Figure 2.6 gives an overview of the findings.

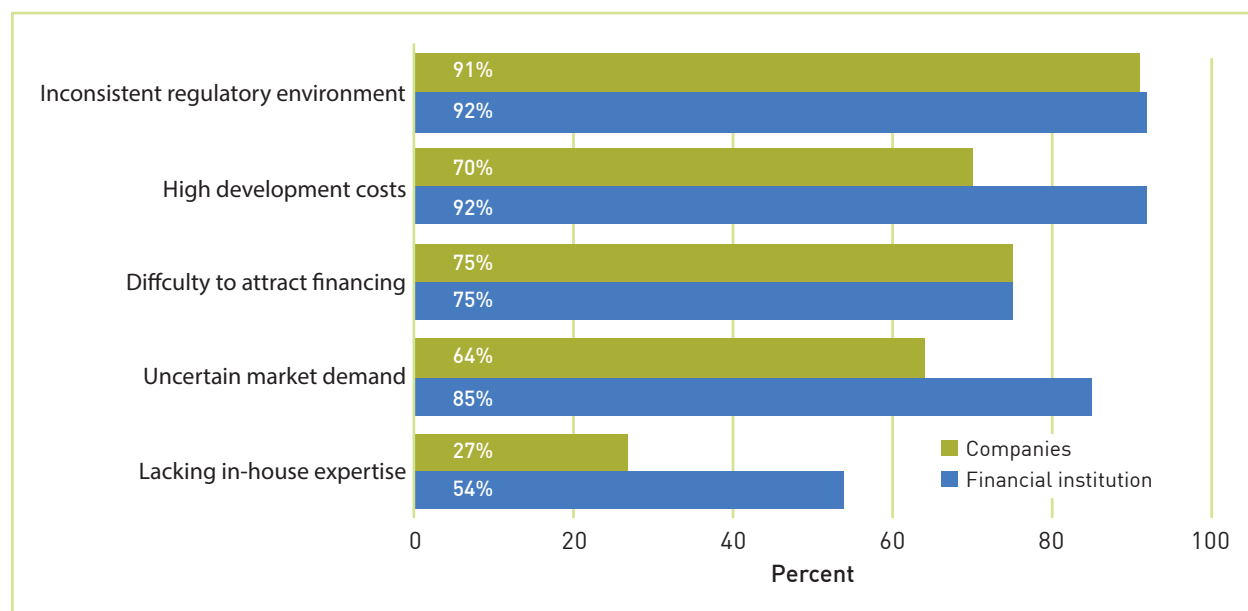
2.4 Opportunities through recent developments

Leveraging private sector finance is key to effectively addressing global environmental issues. This is even more important in developing

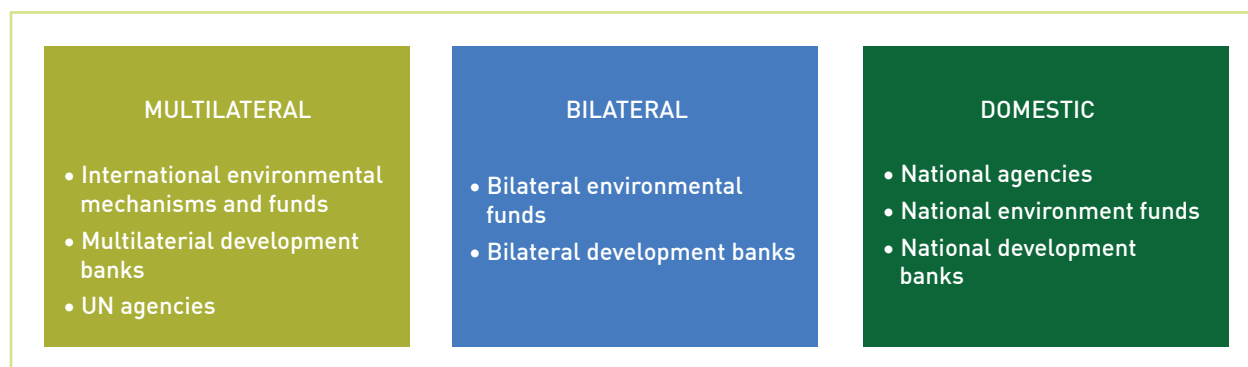
countries, where the public sector generally is weaker and more resource-constrained than in developed countries. An encouraging sign is that private sector investment in developing countries, including in environmental finance, is growing rapidly. By intervening to improve the investment attractiveness of projects, semi-public sector mechanisms can direct and significantly leverage private sector capital flows for environmental finance in developing countries. Multilateral, bilateral, and domestic financial institutions—collectively referred to as semipublic and public development and environmental finance institutions—all play important roles in this landscape (figure 2.7).

Over the last few years, there have been a number of developments that have or may have a significant effect on the environmental finance landscape. These developments all have the potential to positively influence the flow of private sector capital toward environmental projects.

FIGURE 2.6 Hurdles for GEF private sector stakeholders



SOURCE: GEF Project Management Information System.

FIGURE 2.7 Semipublic development and environmental financing organizations

SOURCE: Adapted from Venugopal et al. 2012.

They are important for the GEF to recognize and explore how it can use and build upon them.

INTERNATIONAL AGREEMENTS

In the past years, a number of major international conferences took place with positive outcomes for environmental finance. Three are most prominent. The first is the September 2015 adoption of the SDGs, which provide clear objectives and indicators for private sector involvement in sustainable development, including environmental objectives. The second is the Paris Agreement, concluded during the COP21 in December 2015, which determines national contributions to greenhouse gas emissions, climate mitigation, adaptation, and climate finance. The third is the July 2015 Addis Ababa Conference on Financing for Development, which resulted in an agreement on an economic framework to support the sustainable development agenda, acknowledging the private sector's role as a prominent driving force for development.

LOW INTEREST RATE ENVIRONMENT

The persisting low interest rates in global financial markets offer opportunities as investors

welcome new investment opportunities with reasonable risk-return profiles that have little to no correlation to their other investments. If made investable for institutional investors, environmental projects may increasingly qualify as such, as natural resources (e.g., forests, water, wind) are independent from macroeconomic developments (e.g., inflation).

NEW TECHNOLOGIES AND TOOLS

The monitoring of the impact of environmental projects has become better and more affordable. This increases the transparency and measurability of the impact of efforts, and thus increases the credibility of the environment as an asset class. An example of this is the partnership between the Freshwater Trust NGO and Google; the two partnered to assess the quality of waterways (Reimers 2015).

CORPORATE SUSTAINABILITY

In recent decades, the field of sustainable investing using environmental, social, and governance criteria has become central to corporate management and investment strategies, to improve corporate performance and value creation as well

as to reduce risks associated with environmentally unsustainable practices. As environmental sustainability has become a goal, environmental instruments such as green bonds have begun to emerge as a discrete asset class; climate-friendly and environmentally sustainable investments have also been approached as a hedge against fossil-fuel-related risks, risks of natural disasters, supply chain disruption, climate impacts, and commodity price volatility.

Consequently, institutional investors—particularly those with long time horizons—have increasingly expressed interest in environmental finance products previously limited only to public finance institutions, philanthropies, and impact investors. Private sector entities such as companies, investment funds, and sustainability disclosure and reporting standards have emerged to enable the identification and assessment of environmental performance metrics of corporations and investment products. These new entities populating the environmental finance landscape have increased liquidity, investment capital, and financial products up and down the financing chain, catalyzing a profusion of new opportunities for public environmental financiers to partner with the private sector.

RISE OF IMPACT INVESTING AND CONSERVATION FINANCE

Impact investments are investments made into companies, projects, and funds which aim to generate a specific measurable, beneficial social or environmental impact alongside a financial return. An industry-level analysis on global impact investor market activity undertaken by the Global Impact Investing Network (2016) through an annual survey found that the global impact investing market is scaling at double-digit rates (18 percent compounded annually from 2013 to 2015) and that impact investments are made

across the world using a number of financial instruments, reflecting a wide variety of strategies. Overall, investors are consistently satisfied with both impact and financial performance. Innovative environmental projects are an important focus area for impact investors.

Conservation finance—the dedication of public and private capital for the protection of ecosystems and sustainability of resource use—is also a rapidly growing field. A recent report found that \$52 billion now flows annually to conservation projects, primarily public and philanthropic funds (Credit Suisse Group AG and McKinsey Center for Business and Environment 2016). Private capital allocation is growing as well. In 2015, \$2.0 billion in private capital was committed to conservation projects in three categories: sustainable food and fiber, habitat conservation, and water quality and quantity. The \$2.0 billion represented an 80 percent year-on-year increase from 2014 and a tenfold increase over the past decade (Hamrick 2016). However, this total still represents a small share of the potential: \$3.1 billion in dedicated private sector conservation funds remained on the sidelines in 2015 for lack of identifiable investment opportunities (Hamrick 2016), and an estimated \$300–\$400 billion is needed in annual flows to meet conservation goals, which is six to eight times greater than current levels of investment (Credit Suisse Group AG and McKinsey Center for Business and Environment 2016).

A second report, from Ecosystem Marketplace (Hamrick 2016), reviewing the state of private investment in conservation reported that private capital committed to conservation investments is growing dramatically, jumping 62 percent in a two-year period to \$8.2 billion in 2015, but is still dwarfed by public investment. The report surveyed investors and not-for-profit organizations that responded that a lack of attractive risk/return deals, small transaction sizes, and

management track records were limitations to conservation investment growth.

The findings of these reports offer encouraging evidence that private capital is moving rapidly in environmental directions and that there is an accelerating demand from mainstream investors for impact and conservation investments that generate a return while having a positive impact on natural infrastructure, but there remains a shortage of investments that meet both criteria.

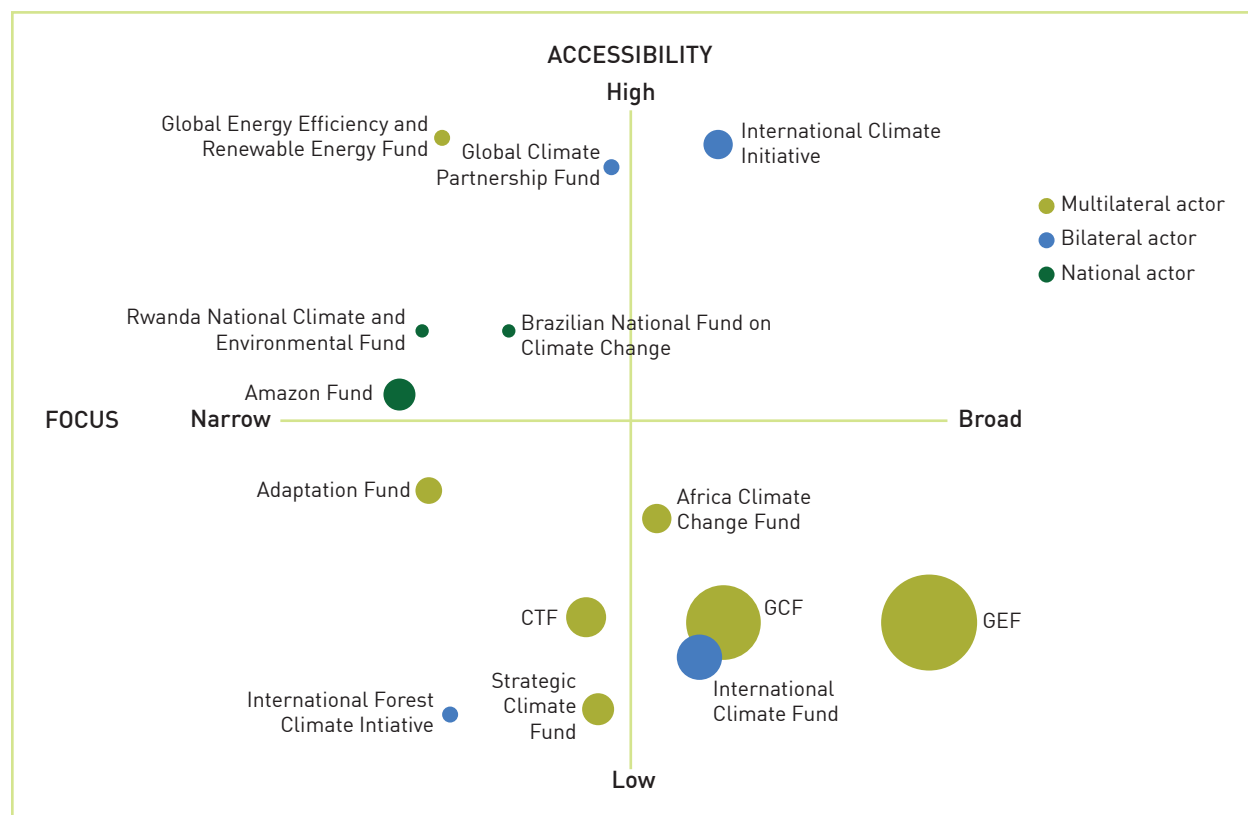
2.5 Semipublic environmental finance actors

As discussed, semipublic development and environmental finance institutions are critical players

in the flow of finance to developing countries for environmental finance activities. These institutions have a dual function: They are crucial mechanisms that invest in riskier environmental projects directly, and they are also well positioned to catalyze additional private sector investment toward relevant environmental projects.

The semipublic and public environmental finance field in which the GEF operates is a complex arena made up of a variety of actors with diverse fund offerings in terms of instruments and environmental themes. In order to provide a basic overview of the actors and mechanisms that operate in this arena, figure 8 plots a sample of 14 multilateral, bilateral, and national funds and

FIGURE 2.8 Snapshot of the semipublic environmental finance landscape



SOURCE: Fund websites; see annex E.

NOTE: Bubble size indicates volume of funding.

mechanisms on two characteristics: their level of focus and their accessibility to the private sector.

The two characteristics are assessed on the basis of qualitative research of a select number of criteria. The horizontal axis depicts the level of focus of the mechanisms, which consists of both their thematic focus (i.e., broad environmental themes or specific focus such as forest management) and their instrumental focus (i.e., solely grant-based or employing nongrant instruments as well). The vertical axis indicates the accessibility of the funds to the private sector. Accessibility is assessed according to three criteria: the extent to which they operate directly with the private sector (i.e., involvement of partners and intermediaries or not), their communication on private sector engagement, and their disclosure of project cycle information (for further details on the methodology used for figure 2.8, see [annex E](#)).

Three striking features can be observed in the graph. As noted, the GCF and, to a slightly lesser degree, the Clean Technology Fund (CTF) are the GEF's main peers. All three mechanisms are the largest in the field and comparable in terms of focus and accessibility (the CTF scores slightly higher than the others on focus, but this focus diminishes if the CTF is viewed as part of the thematically broader CIF). The second is the lack of funds in the upper right quadrant, which appears to indicate that it is challenging to combine a broad instrumental and thematic focus with easy access for the private sector. The third is that the European mechanisms promoted by the European Investment Bank (Global Energy Efficiency and Renewable Energy Fund), European development finance institutions (Global Climate Partnership Fund), and the German government (International Climate Initiative [ICI]) appear to be most accessible to the private sector, while still offering different opportunities. The International Climate Initiative, the only mechanism in the upper right

quadrant, has a broad thematic and instrumental focus providing both grant and nongrant instruments. In terms of accessibility, project cycle information and criteria are easily available and proposals can be submitted electronically.

For a more detailed discussion on the role of semipublic development and environmental finance institutions in directly financing and leveraging private sector financing through financial instruments and advisory services, see [annex D](#). A review of the structure, focus, and private sector engagement of the GCF and CIF (of which the CTF is the largest constituent fund), the two largest and most similar peers of the GEF in terms of environmental finance, follows.

2.6 The Green Climate Fund and the Climate Investment Funds

THE GREEN CLIMATE FUND

The GCF was established in 2010. It has raised \$10 billion, which it aims to deploy on low-emission and climate-resilient projects and programs in developing countries, equally distributed between mitigation and adaptation. At least 50 percent of its adaptation funding goes to the most vulnerable countries, including least developed countries, small island developing states, and African states. Its board is evenly split between developed and developing country representatives. Among other features, it has a Private Sector Facility (PSF) to finance direct private sector engagement, and has a risk-bearing capacity that can be structured to leverage additional investment.

National designated authorities at the country level serve as focal points and provide the interface between country priorities and the GCF. GCF resources are channeled through accredited entities; these can be private or

public, nongovernmental, subnational, national, regional, or international, and have to go through an accreditation process. They develop funding proposals and manage and monitor projects and programs. As of April 6, 2017, there are 48 accredited entities, of which 52 percent are international (development finance institutions, commercial banks, investment funds, UN agencies such as the United Nations Development Programme [UNDP], and international environmental groups like the World Wildlife Fund and Conservation International); 29 percent national (national entities such as the National Environment Management Authority of Kenya); and 19 percent regional (regional development finance institutions such as the Caribbean Development Bank).² A further 160 entities are awaiting accreditation as of March 2017. The GCF thus differs significantly from the GEF with respect to access modalities.

The GCF has two funding windows: Mitigation and Adaptation, which are implemented by sovereign governments; and the PSF, which is implemented by nongovernment accredited entities. Thus, the implementing entity determines whether a project is classified as private sector. The GCF defines “private sector” as projects not implemented by sovereign governments. All such projects are reviewed by and implemented through the PSF.³

The PSF’s mandate is “to fully engage private sector investors, developers, entrepreneurs, corporations, and small and medium sized enterprises (SMEs) in climate-sensitive and resilient projects throughout the developing world. It aims to mobilize at scale private funding flows

from local, regional, and international commercial banks and institutional investors (i.e., insurance companies, pension funds, and private equity funds)” (GCF 2016, 27). The vast majority of the projects concern sustainable energy, either through energy efficiency credit lines and facilities or through investment funds for renewable energy, including off-grid solar systems to improve energy access.

The PSF focuses on deal making with private sector financial institutions, and it works with a range of co-investors. For the GCF’s public sector projects, governments are the usual cofinanciers; sometimes accredited entities put their own money in. For PSF proposals, the investor mix depends on the type of proposal and financial product. For an equity proposal, the PSF has co-invested with an impact fund, family offices, and corporations such as Google and eBay. For other types of proposals, financial institutions, MDBs, and local financial intermediaries are typical cofinanciers.

The PSF often mixes mechanisms of financial support within individual projects. Most incoming proposals propose a mix of grants and loans, grants and equity, or grants and guarantees. The GCF also tries to narrowly target concessionality to end-beneficiaries (e.g., small enterprises) and target sectors, rather than to private sector banks, accredited entities, or other intermediaries.

As of the end of the 16th board meeting in April 2017, the GCF had committed \$2.25 billion in 43 projects. Of these, 12 projects are classified as private sector projects, toward which the GCF has committed approximately \$1.3 billion in a combination of equity, loans, guarantees, and grants; these 12 projects account for approximately 57 percent of the funding amount. Each dollar from the GCF is expected to leverage \$3

²Source: GCF website, “[Accredited Entity Directory](#).”

³The GCF is still exploring its position in relation to PPPs. A distinctive feature of the GCF is that some of its accredited entities are commercial banks, and these would be mapped to the PSF (GCF 2015).

additional from development finance institutions, other private sector entities, the public sector, and other facilities, for a total project value of \$4 billion.

There is a significant difference in the instruments used for the private sector compared to the public sector. A review of the overall portfolio prior to the April 2017 board meeting indicated that 47 percent of the funding committed is in the form of grants, 42 percent in loans, 10 percent in equity and 1 percent in guarantees. These numbers contrast with those for the private sector: Only about 8 percent of the funding provided is in the form of grants. Loans account for 70 percent, while equity is at 19 percent and guarantees 3 percent. In terms of thematic area, three of the nine projects concern credit lines or related intermediary instruments, but these three projects represent over 50 percent of the project investment and of the GCF funding committed. These have been undertaken with the European Bank for Reconstruction and Development (EBRD) and the Inter-American Development Bank (IDB)—both GEF partners.

It is not possible to glean hard financial information regarding the terms of the GCF instrument in these private sector projects, since term sheets and the financing agreements are not publicly available. Despite a standard format, there remains great variability in the information contained in the funding proposals. However, some of the proposals reviewed indicate that the GCF financing is “concessional” relative to the prevailing AE rates. In interviews, GCF representatives indicated that levels of concessionality are determined ad hoc based upon the market niche and objective of individual investments, and that concessionality, when provided, is intended to be targeted to end-beneficiaries, rather than to accredited entities or other financial intermediaries.

Some of the projects approved for financing by the GCF also include financing from other climate finance providers, notably the CTF. One example is the Energy Efficiency Green Bonds in Latin America and the Caribbean, an IDB-led project to finance and aggregate energy efficiency projects with a view to their eventual securitization. The project is to be implemented in phases, with the GCF providing \$20 million in guarantees and \$2 million in technical assistance; the CTF is also providing \$19 million in a second loss guarantee for IDB loan financing. It would be interesting to see if there are differences in the structuring of the GCF and CTF funding, along the lines of the World Bank’s India Partial Risk Sharing Facility for Energy Efficiency project, discussed below.

THE CLIMATE INVESTMENT FUNDS

The CIF consists of two funds: the CTF and the Strategic Climate Fund, which in turn includes three targeted programs: the Forest Investment Program, Scaling Up Renewable Energy Program (SREP), and the Pilot Program for Climate Resilience. The governance structures of the CTF and the Strategic Climate Fund comprise equal representation from contributor and recipient countries. The CIF works through MDBs, which serve as both intermediaries and implementing entities.⁴

Set up in 2008, the CIF has mobilized \$8.3 billion in funding from 14 countries for investments in renewable energy, energy efficiency, sustainable transport, climate resilience, and sustainable forestry management in 72 countries. The CTF is by far the largest CIF fund, at \$5.6 billion. Overall, the CIF has approved financing of \$4.9 billion, of which \$1.8 billion has been disbursed (as of the end of December 2015; the annual report for

⁴ Source: CIF website, “[Governance](#).”

2016 is not yet available); total cofinancing in the projects and programs concerned is \$36 billion—resulting in a cofinancing ratio of 1:7 (CIF 2015).

Across the CIF, \$2.3 billion (or close to 30 percent of \$8.3 billion total CIF funding) is designated for projects and programs that aim to stimulate private sector participation. Private sector engagement can take place in three ways:

- Direct or intermediated finance through MDBs' private sector windows
- Through PPPs
- Through private cofinancing of public investment projects

The CIF employs two financing vehicles for engaging the private sector in program operations: \$1.7 billion allocated for private sector projects specified in CIF investment plans and approximately \$640 million allocated to specific private sector facilities to achieve scale and speed in response to market demand, including \$465 million allocated through the CTF dedicated private sector programs. CIF funding can be deployed across a range of instruments, based on the implementing MDB practice. CIF funding can be subordinated to the MDBs, providing greater structuring flexibility, and can be used for local currency lending (with the foreign exchange risk borne by the CIF).⁵

Like the GEF, the CIF's country- and government-led investment planning process seems to have resulted in most funding being focused on the public sector, with the lengthy approval processes further discouraging private sector engagement (ICF International 2014). Private sector investments make up the balance (roughly \$2 billion or 25 percent of the CIF by dollar value),

usually in the form of special project vehicles, a common project finance structure, with private sector ownership of project equity and without recourse to sovereign guarantees.

While leveraging private capital is embedded in the CIF mission, after several years of operation it became apparent that the CIF, including the CTF, was skewing toward public sector investment, in part because governments preferred to implement their own projects, in part because it was faster and easier for MDBs and governments to partner in historically proven ways, and in part because in some sectors and regions private sector funding was scarce and more difficult to properly price.

Consequently, in 2012 the CIF established private sector carve-outs of donor funds for private sector projects. In the Forest Investment Program, SREP, and Pilot Program for Climate Resilience, private sector carve-outs constitute 10–20 percent of those respective fund portfolios. The CTF established the dedicated private sector programs to “finance operations that can deliver scale (in terms of development results and impact, private sector leverage and investment from CTF financing) and speed (faster deployment of CTF resources, more efficient processing procedures), while at the same time, maintaining a strong link to country priorities and CTF program objectives.”⁶ Roughly 25 percent of the CTF resources, or \$460 million of \$1.5 billion, were earmarked for and disbursed through the dedicated private sector programs.

Both the CIF and the GCF have in recent years developed, and continued to develop, targeted initiatives, funding vehicles, and programming and investment modalities to enhance and better

⁵ Source: CIF website, “[Private Sector](#).”

⁶ Source: CIF website, “[Dedicated Private Sector Programs](#).”

target the engagement of, investment from, and impact on the private sector. The CTF has participated in cofinancing projects alongside the GEF (albeit on different terms) as well as with the GCF. One such project is the World Bank's India Partial Risk Sharing Facility for Energy Efficiency (GEF ID 4918). This project involves a GEF financing of \$18 million, a CTF financing of \$25 million, and other cofinancing for \$127 million. \$12 million of the GEF financing is to fund a risk-sharing facility (the balance is for technical assistance); the risk-sharing facility is "backstopped" by \$25 million of CTF contingent finance. Although classified as a guarantee, the GEF financing is used to fund the risk-sharing facility and cover facility management and operating expenses in addition to guarantee calls. No reflows to the GEF are foreseen, as any remaining balances in the facility accrue to the government for appropriate disposition because of the specific programming requirements of the country allocation model. A guarantee fee is charged to users of the facility, and fees are used to pay the CTF's fees and other operating expenses for the facility. This example demonstrates the different risk (and return) profiles of the two multilateral climate finance providers (the GEF and the CTF), with the GEF in the highest-risk position.

THE GEF, THE CIF, AND THE GCF: A COMPARATIVE ANALYSIS

[Annex F](#) presents the similarities and differences among the GEF, the CIF, and the GCF. They all share a desire to catalyze private sector investment—particularly in the climate change arena—through a mix of support mechanisms anchored by relatively large-scale investments. A number of areas of relative difference and comparative advantage have emerged from the comparative analysis, largely reinforcing feedback from the private sector stakeholder survey.

First, the GEF has an environmental mandate that extends beyond climate change, setting it apart from the CIF and the GCF. Many outside observers have lauded the GEF's multifocal approach, targeting the drivers of environmental problems and harnessing multiple benefits across different thematic areas (such as land degradation and biodiversity), which was noted as a particular strength by stakeholders (Amerasinghe et al. 2017). Consequently, the GEF is best situated among the three to pursue cross-cutting thematic programs that address not only climate change, but also domains of other environmental conventions. As a result, the GEF may find its thematic niches in areas both outside of the climate change arena entirely, as well as in those that engage multiple sectors or environmental issues.

The GEF can support impact at scale through its funding across multiple sectors. One outside survey found that the GEF "should focus on its traditional strengths in working across the five conventions it serves (Climate Change, Biological Diversity, Persistent Organic Pollutants, Desertification, and Mercury), and focus its 'pure play' climate change projects on targeted activities that have large catalytic impacts." (Amerasinghe et al. 2017)

Second, the GEF appears to be uniquely well-suited to take on early stage risk, both because of its mandate—allowing substantial grant components and limited reflows when necessary—as opposed to the CIF (particularly the CTF) and the GCF, which are both heavily focused on direct collaboration with investors and financial intermediaries to expand clean energy and climate change markets.

The CIF differs from the GEF and the GCF in that it has only six implementing institutions, and all are MDBs. Consequently, there is a high degree of coordination between the CTF and its partner

MDBs to blend finance in project deals and to negotiate precise terms. Furthermore, playing to the strengths and operating modalities of MDBs, CIF investments—particularly in the CTF—focus on nongrant financial products that approximate market transactions in their structure. Non-CTF CIF projects (Pilot Program for Climate Resilience, Forest Investment Program, and SREP) include greater proportions of grants for technical assistance, policy support, etc., pushing them further across the spectrum away from market transactions toward traditional development assistance.

The GCF, by contrast, is unique among large climate finance institutions in seeking to directly target local financial institutions, the private sector, and nongovernmental nonprofit entities. As of April 2017, the GCF had accredited a total of 48 implementing entities. The PSF is currently prioritizing “direct access,” i.e., disbursement of resources and channeling of investment directly to such local institutions in developing countries, rather than primarily through MDBs as intermediaries. The GCF is actively encouraging those local/national entities to get accredited and apply directly.

Consequently, the CIF appears to be best situated to neatly tailor its programs to the strong suits of the MDBs: large-scale lending and anchoring investments in collaboration with the private sector. Meanwhile, the PSF appears to be de-emphasizing existing multilateral and international financial institutions, instead focusing on local initiatives in developing countries, as well as on initiatives (regardless of the implementer) that focus on small and medium enterprises. Both approaches are heavily focused on transactions.

The GEF appears to have particular strength and experience in the domains of institutional capacity building, policy and regulatory development to

improve the investment climate, alliance building, and innovative approaches—i.e., all of the intervention models aside from innovative financing approaches. Capacity building has been noted by private sector stakeholders and GCF staff as a unique GEF strength. The World Resources Institute report comparing international climate finance institutions also found that the GEF “has a critically important role to play in advancing country ownership through its focus on capacity building. Its historic emphasis on capacity building was further strengthened by the mandate it received from COP21 to implement the Capacity Building Initiative for Transparency” (Amerasinghe et al. 2017). The World Resources Institute also advocated for the GEF continuing to maintain broad country coverage within these core strengths.

The GEF has played an important role in demonstrating private sector viability in nascent markets (notably in climate change mitigation) through its ability to tolerate higher levels of risk. However, as these markets grow, complex financial structures, despite efforts dating back to early GEF replenishments through the Earth Fund and recent efforts since GEF-5, are less proven and relatively untested for the GEF. Consequently, it may find that its resources in such emerging markets are best deployed to explicitly enable, support, and prepare the pipeline and investment climate for other more established climate finance institutions such as the CIF and GCF.

In a number of instances, the GEF, the CIF, and the PSF have already interacted directly in a complementary way, including through jointly supported projects. However, this type of close collaboration appears to be the exception rather than the rule in GEF projects that have reached the CTF and the GCF. More intensive collaboration and portfolio development could enhance these synergies.

The ample opportunities in conservation finance beyond the narrow scope of climate change and the identified priorities of the GCF and the CIF suggest that the GEF has many opportunities to establish niches and comparative advantages in the innovative finance arena as well. Within the climate space, GEF appears better suited to fund smaller-scale and high-risk investments that are too small for MDBs or commercial banks, but which are necessary to bring down perceived risks in new markets, a view corroborated by GCF staff.

Others have noted, “The GEF may face constraints in supporting bigger programs due

to its allocation system, but it could build on its cross-sectoral programming and rely on other entities to co-finance promising initiatives” (Amerasinghe et al. 2017). Consequently, cross-cutting programs could benefit from advance planning for the scale-out of funding in collaboration with other environmental finance institutions.

A brief description of other comparative bilateral and regional agencies providing finance for environment-related investments can be found in [annex G](#).

3: GEF models of engagement with the private sector

Guided by the environmental conventions that it serves ([annex H](#)), the GEF has a long history of working with a wide range of private sector partners. Within the GEF, there is no single entity or sector that constitutes the private sector, and the GEF defines private sector engagement as “broad partnerships rather than specific capital investments” (GEF 2011a). GEF private sector engagement can thus be mapped in a cross-cutting manner according to a range of operational approaches and programs.

3.1 GEF-6 engagement

The GEF-6 period aims to take a holistic and comprehensive approach to engaging the private sector as compared to the previous replenishments. Three specific priorities have been identified in expanding such engagement (GEF 2014a): mainstreaming, IAPs, and the nongrant pilot.

MAINSTREAMING

GEF-6 takes a three-pronged approach to mainstreaming private sector engagement in its programming, project design, and monitoring and reporting strategies: (1) fostering private sector mainstreaming within GEF-6 programming across all seven focal areas; (2) fostering enhanced awareness on private sector engagement and private sector-friendly project design; and (3) better tracking and monitoring of private sector engagement.

As demonstrated by previous evaluations and portfolio analysis, five intervention models (discussed below) identified in the GEF2020 Strategy (GEF 2014c) have been used by GEF-6 for addressing barriers to private sector engagement and strengthening such engagement.

NONGRANT PILOT

Building on the nongrant instruments launched under GEF-5, GEF-6 has set aside \$110 million for a nongrant pilot program that aims to enhance private sector engagement and expand the use of nongrant instruments such as credit guarantees and concessional loans to deliver global environmental benefits.

INTEGRATED APPROACH PILOT PROGRAMS

IAPs are pilot programs that address major drivers of environmental degradation in a holistic, industry-wide manner. They are being designed and implemented through a platform that involves key stakeholders, such as the private sector, up front. The three main IAPs focus on food security, sustainable cities, and taking deforestation out of commodity supply chains. Separate evaluation studies on the IAPs are being undertaken and will be presented in the context of the Sixth Comprehensive Evaluation of the GEF (OPS6) in the fall of 2017. They will include an examination of the private sector in the design and development of the programs.

3.2 Intervention models

The GEF2020 Strategy (GEF 2014c) has identified five intervention models (table 3.1) used by the GEF to work with a range of private sector actors, from capital providers to entrepreneurs, to address barriers to private sector engagement.

According to a categorization of a sample of 101 GEF-5 and GEF-6 private sector projects, 80 percent of projects relied on more than one intervention model. This finding resonates with information from the 22 interviews that corroborate that GEF projects are designed to address complex issues, hence a variety of intervention models are needed to overcome the barriers to environmental protection.

Among the intervention models, the most commonly applied ones are those that facilitate institutional strengthening (72 percent) and those that transform policy and regulatory environments (68 percent). These are critical elements to help build capacity and put in place the right incentive and signals that allow the private sector

to redirect its investment in an environmentally sustainable manner.

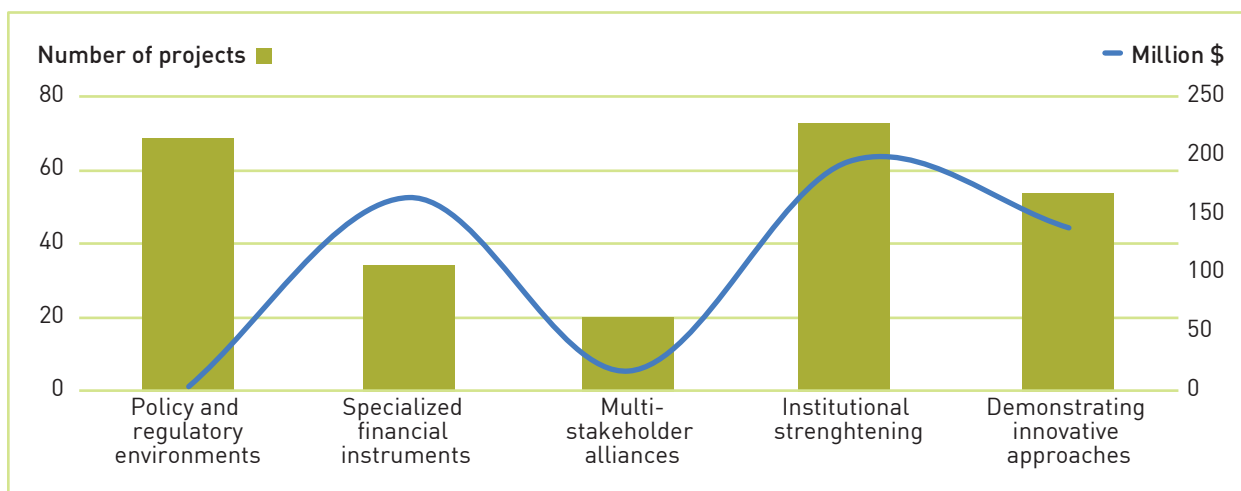
Although there are a high number of projects supporting enabling policy and regulatory environments, this category does not receive as high a GEF investment in dollar terms (figure 3.1). GEF investments were predominantly planned for specialized financial instruments and institutional strengthening. In fact, specialized financial instruments, such as loan guarantees or revolving funds, are the most capital-intensive intervention models with the highest investment-to-number of projects ratio. Only 20 out of the 101 projects applied only one intervention model. Half of these single-model projects are classified under specialized financial instruments.

Projects focusing on chemicals and waste and biodiversity are most likely to involve the innovative approaches component. In general, enabling policy and regulatory environment and institutional strengthening are the most commonly observed categories in all types of projects across every region (figure 3.2). There are several

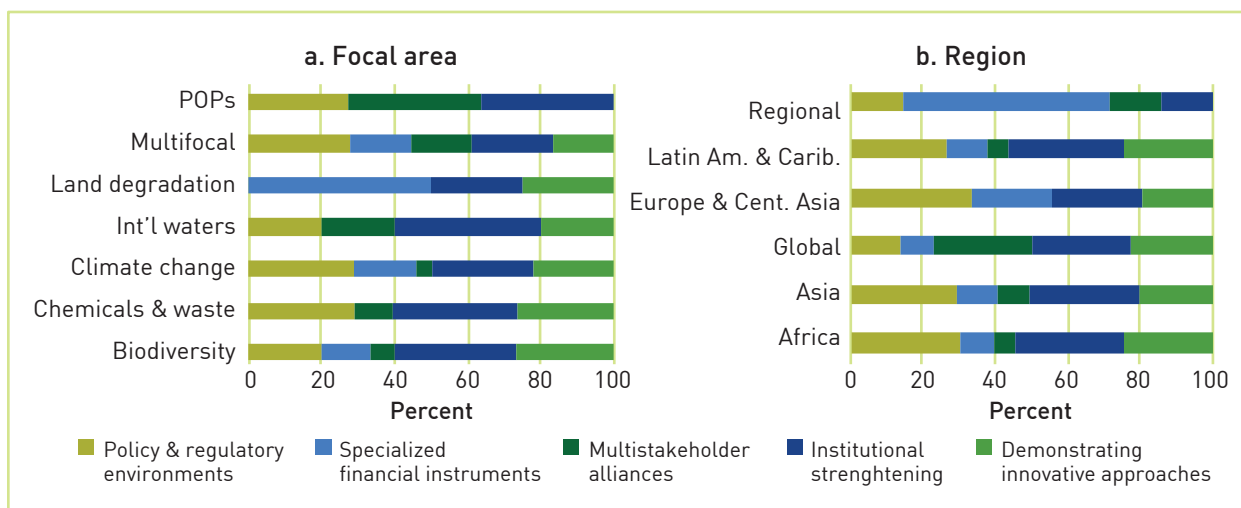
TABLE 3.1 Five intervention models for GEF private sector engagement

Intervention model		Description	Examples
	Transforming policy and regulatory environments	Incentivizing the private sector and consumers to make optimal decisions through consistent policy and regulatory environments	- New policy and regulatory frameworks - Feed-in tariffs for renewable energy
	Strengthening institutional capacity and decision making	Strengthening institutions and enhancing accountability in public and private decision-making processes	- Capacity building for public agencies - Advisory services (e.g., for SMEs)
	Convening multistakeholder approaches	Collaborative goal setting by a partnership of a variety of stakeholders to overcome complexity and coordination failures	- Certification (e.g., Rainforest Alliance) - Transformational targets (e.g., 80% of cocoa sustainable by 2020)
	Demonstrating innovative approaches	Supporting a technology, policy, or approach that can be adopted by a variety of stakeholders and subsequently scaled up	- Payment for ecosystem services - Cleantech innovation programs
	Deploying effective financial instruments	Providing instruments that help cover risks or investment gaps, thereby providing incentive and leveraging private sector investments	- Loan guarantees - Revolving funds

SOURCE: GEF 2014c.

FIGURE 3.1 Number of and GEF investment in GEF-5 and GEF-6 projects by intervention model

SOURCE: IEO analysis

FIGURE 3.2 Frequency of different intervention models, by focal area and region

SOURCE: GEF Project Management Information System.

examples, also, of strong multistakeholder alliances across the GEF partnership (box 3.1).

3.3 Private sector grant and nongrant portfolio

The private sector portfolio identified for OPS6 is made up of 460 projects from the pilot phase

to GEF-6 (see [annex B](#)).¹ This portfolio makes up about 17 percent of the broader GEF portfolio in terms of total GEF investment. Regarding the

¹In the Fifth Overall Performance Study (OPS5), 290 projects were identified and analyzed. Ten of these projects have been canceled or dropped since OPS5. This study identified another 170 projects. The projects in the portfolio are as of September 30, 2016.

BOX 3.1 Examples of multistakeholder alliances intervention model at work

Strengthening Capacity for International Cooperation in the Ecosystem-based Management of the Antarctic Large Marine Ecosystem (GEF ID 9443, GEF grant: \$6,192,694; cofinancing: \$45 million). The objective of this project is to strengthen multilateral cooperation in ecosystem-based management of the Antarctic Large Marine Ecosystem (ALME) through supporting national-level institutional strengthening and building the capacity of GEF-eligible countries to meet their marine resource management commitments and obligations under the intergovernmental Convention for the Conservation of Antarctic Marine Living Resources, to help ensure sustainable ALME fisheries in the context of climate variability and change.

Through multinational cooperation, multisectoral coordination, and partnership, the project will enhance ecosystem-based management and monitoring of ALME. Partnerships will also be established with the private sector, including industry associations, and civil society to improve the management effectiveness of the convention. Key private sector partners will include national-level stakeholders and international bodies such as the Antarctic and Southern Ocean Coalition, the Association of Responsible Krill Harvesting Companies, and the Coalition of Legal Toothfish Operators.

Transforming the Global Aviation Sector: Emissions Reductions from International Aviation (GEF ID 5450, GEF grant: \$1,950,000; cofinancing: \$8.3 million). The objective of the program is to support the building of capacity in developing countries for implementing technical and operational measures for reducing carbon dioxide emissions from international aviation. In partnership with airlines and other international aviation stakeholders, the project will establish a technical support platform that brings together information essential to implement aviation emission reductive measures. The information will be public domain and will be collected from different sources, including the International Civil Aviation Organization, national governments, academia, vendors, and business associations. The availability of such a platform will also significantly reduce the time spent, costs, and other overheads of developing states to collate information, leading to incremental implementation of emissions reduction measures.

Global Opportunities for Long-Term Development of ASGM Sector (GEF ID 9602, GEF grant: \$45,262,294; cofinancing \$135,174,956). The project aims to reduce the use of mercury in the artisanal and small-scale gold mining (ASGM) sector in the participating countries through facilitating access to finance for artisanal miners and mining communities for the introduction of low- and nonmercury technologies and techniques and through the development of sustainable ASGM gold supply chains. ASGM is the largest global source of anthropogenic mercury releases into the environment, with about 35 percent of total releases from a multitude of sites in over 70 countries. It occurs almost entirely in developing countries and countries with economies in transition.

Eight countries in the three major regions where ASGM is present will participate in the program. The project will help use or set up revolving funds and provide support to ASGM communities to build their capacity to access financing. In some countries, the funds will be set up by the host government, while in others, it will be set up in collaboration with external investors. The project will also work with gold consumers, and, in particular, with industrial users in order to raise awareness of their potential to positively influence gold extraction practices through ensuring implementation and compliance with international standards. Finally, the development of more direct gold value chains, through the cooperation between national gold buying institutions and international refiners and gold end-users, will ensure miners who respect environmental and social standards obtain a better selling price for their production.

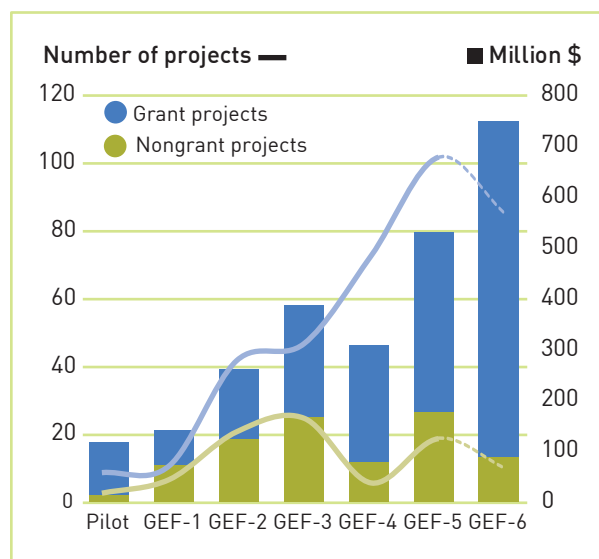
number of projects, this private sector portfolio is approximately 11 percent of the total of 4,319 projects that are approved as of September 30, 2016.

Among the 460 projects, included are 91 projects that have used nongrant instruments (see [annex I](#)), which are by definition expected to generate financial returns. The remaining 369 projects are private sector grant projects. Altogether, these 460 projects represent \$2.499 billion in GEF grant investment. Unless stated otherwise, the private sector portfolio represents both grant and nongrant projects.

As shown in figure 3.3, the number of projects and investments under each GEF period varies. Investment dollars dipped in GEF-4 for the private sector portfolio. In GEF-5, the total amount of investment from the GEF for private sector engagement projects reached \$531.9 million. During the same period, the nongrant portfolio increased to 19 projects with \$178.4 million investment, the highest amount so far. Compared to the broader private sector portfolio, the number of projects using the nongrant vehicle remains a small fraction.

UNDP was the lead Implementing Agency for approximately 40 percent of the private sector grant portfolio. The World Bank, the United Nations Environment Programme (UNEP), and the United Nations Industrial Development Organization implemented another 24 percent, 13 percent, and 13 percent respectively. The remaining 10 percent of projects were implemented by the regional development banks, the International Fund for Agricultural Development, and the Food and Agriculture Organization of the United Nations. Figure 3.4 presents the number of projects and the corresponding GEF grant and cofinancing amounts with these implementing Agencies.

FIGURE 3.3 GEF investment in and number of private sector grant and nongrant projects, by replenishment period



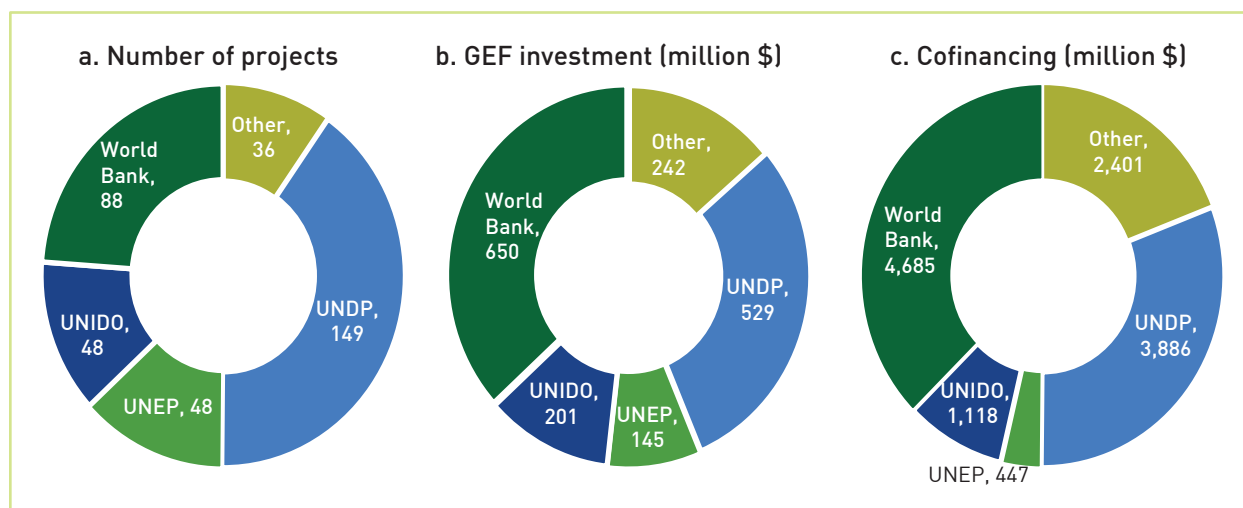
SOURCE: GEF Project Management Information System.

Historically, most nongrant projects have been implemented through UNDP (33 percent) and IFC as a member of the World Bank Group (32 percent). IDB and UNEP implemented another 9 percent and 8 percent of projects, respectively. African Development Bank-led projects obtained the highest cofinancing ratio (1:30) among all lead implementation Agencies in the nongrant portfolio (figure 3.5).²

COFINANCING

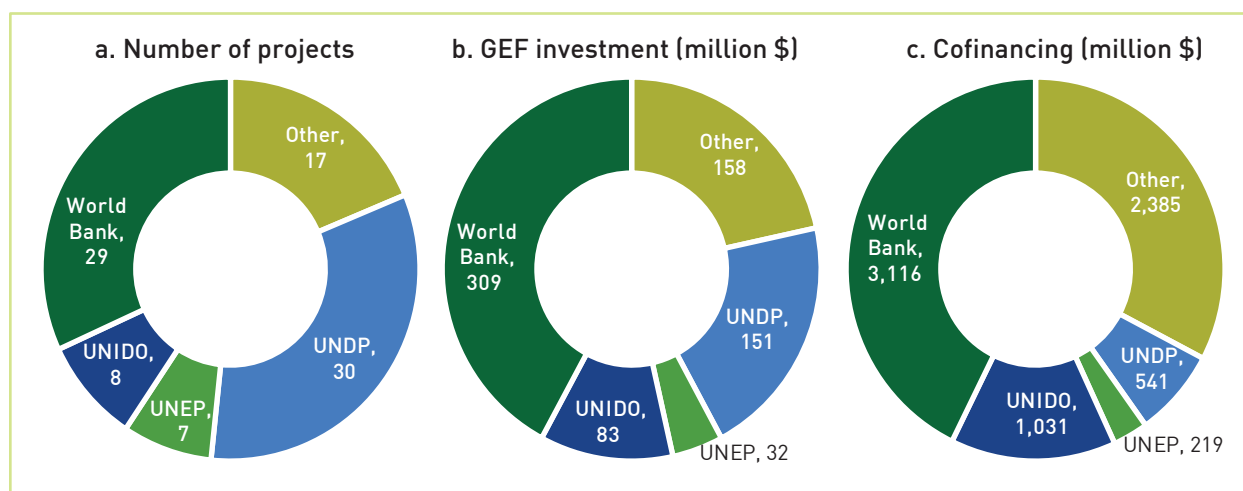
For the private sector portfolio, on average, each GEF grant dollar leverages \$8 in cofinancing. If the nongrant projects, which have high cofinancing, are removed from the overall portfolio, one GEF grant dollar leverages \$7 cofinancing.

² This high leverage ratio is mostly a result of Investing in Renewable Energy project preparation under the Sustainable Energy Fund for Africa (GEF ID 9043), in which a \$10 million GEF investment is expected to leverage \$955 million in cofinancing.

FIGURE 3.4 Distribution of private sector grant projects, by Agency

SOURCE: GEF Project Management Information System.

NOTE: UNIDO = United Nations Industrial Development Organization.

FIGURE 3.5 Distribution of nongrant projects, by Agency

SOURCE: GEF Project Management Information System.

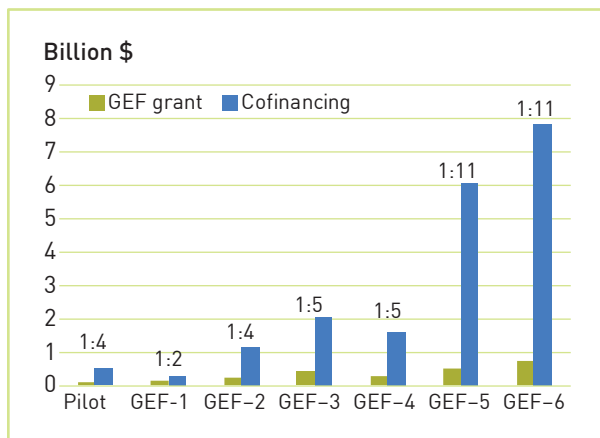
NOTE: UNIDO = United Nations Industrial Development Organization.

For the overall private sector portfolio, \$3 out of \$8 in cofinancing comes from private sector investment. In the nongrant portfolio, \$4 out of \$8 in cofinancing comes from the private sector.

As can be seen from figure 3.6, the leverage ratio (GEF grant to cofinancing) stayed steady in the

first four GEF periods in the overall private sector portfolio. In GEF-5, for every dollar financed by the GEF, \$11 was financed by other parties (including the private sector). This is a significant increase when compared to the cofinancing ratio in the first five periods, where every GEF dollar was matched by approximately \$4 in cofinancing.

FIGURE 3.6 Total cofinancing in private sector projects, by replenishment period



SOURCE: GEF Project Management Information System.

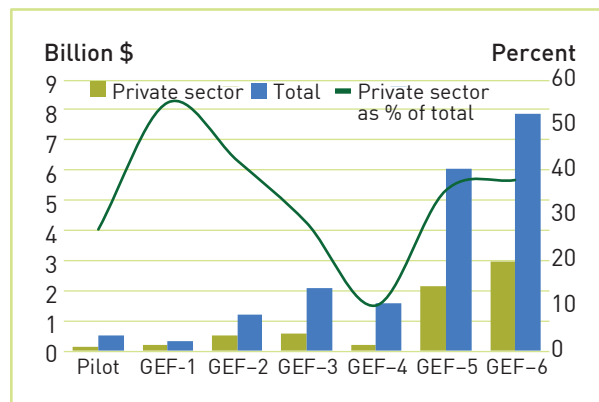
NOTE: Values noted are leverage ratios.

The absolute amount of cofinancing remains steady and increased from GEF-5 to GEF-6, suggesting that the cofinancing from the private sector, catalyzed in large part by PPPs and non-grant instruments, is increasingly strong.

Figure 3.7 visualizes cofinancing from the private sector as a part of total cofinancing volumes per replenishment period. As shown, cofinancing from the private sector generally increased in absolute terms (with the notable exception of GEF-4, at which time the country allocation framework was introduced). The private sector contribution to cofinancing peaked in GEF-6. In this replenishment period, approximately 38 percent of cofinancing came from the private sector. In fact, every dollar spent by the GEF is matched by \$4 from the private sector in GEF-6.

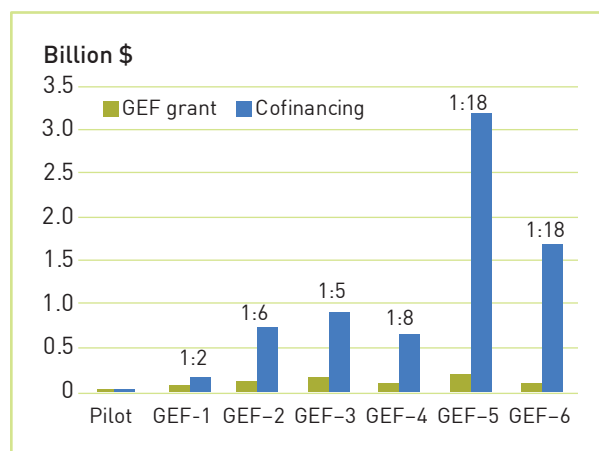
For the nongrant portfolio, on average, every GEF grant dollar leverages \$10 in cofinancing, and \$5 of \$10 in cofinancing comes from private sector investment. As illustrated in figure 3.8, the leverage ratio (GEF grant to cofinancing) increased steadily during the GEF replenishment period (except in GEF-3). In GEF-5, for every dollar

FIGURE 3.7 GEF leveraging of private sector and total cofinancing in the private sector portfolio



SOURCE: GEF Project Management Information System.

FIGURE 3.8 Total cofinancing in the nongrant portfolio, by replenishment period



SOURCE: GEF Project Management Information System.

NOTE: Values noted are leverage ratios.

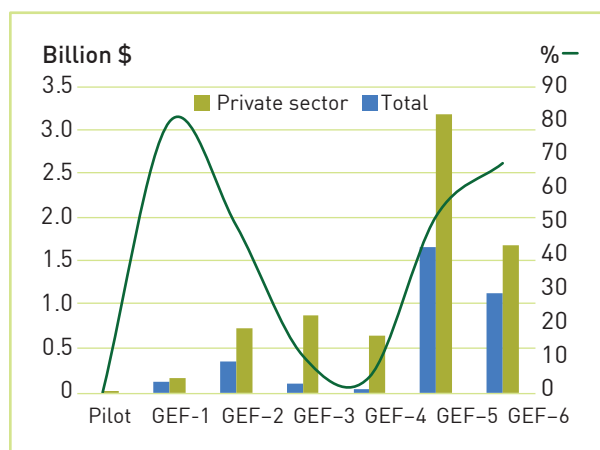
financed by the GEF, \$18 was financed in private sector projects by other parties. This is a significant increase when compared to the cofinancing ratio in the previous periods, where every dollar from the GEF was matched by approximately \$5 in cofinancing. In contrast to the stable investments from the GEF, the absolute amount of cofinancing peaked in GEF-5 and stayed strong in GEF-6.

Figure 3.9 shows cofinancing from the private sector for nongrant projects as a part of total cofinancing volumes per replenishment period. As can be seen, cofinancing from the private sector was significant in GEF-1 and GEF-2, then dipped in GEF-3 and GEF-4. In the two latest GEF periods, cofinancing from the private sector for the nongrant portfolio was a larger portion of total cofinancing. In GEF-6, the private sector's contribution to cofinancing makes up 68 percent of total cofinancing. This reveals the private sector's expanding interest in involvement with the nongrant projects.

MODALITY, FOCAL AREA, AND REGION

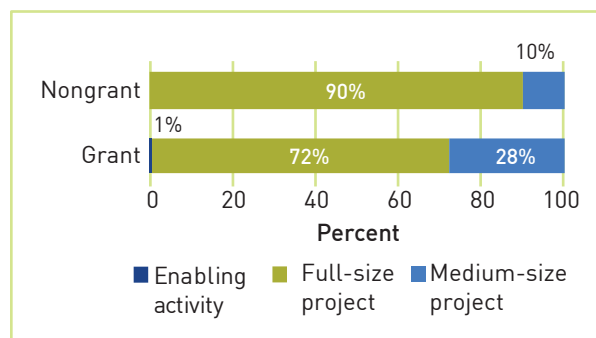
The overall private sector portfolio contains 346 full-size projects, 112 medium-size projects, and 2 enabling activities. In the private sector grant portfolio, full-size projects greatly outnumber medium-size projects. Seventy-two percent of the private sector portfolio (264 projects) is made up of full-size projects. The fraction of full-size projects is even more dominant in the nongrant portfolio (90 percent) than in the private sector grant portfolio (figure 3.10).

FIGURE 3.9 GEF leveraging of private sector and total cofinancing in the nongrant portfolio



SOURCE: GEF Project Management Information System.

FIGURE 3.10 Project size distribution in the private sector portfolio

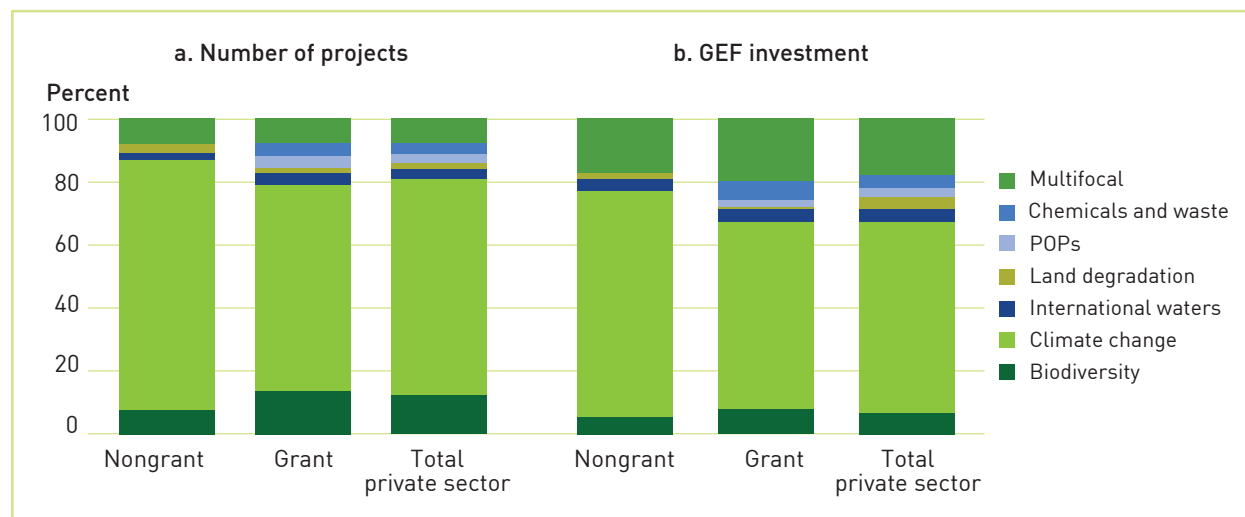


SOURCE: GEF Project Management Information System.

As shown in figure 3.11, projects in the climate change focal area account for the bulk of the private sector portfolio. Sixty-eight percent of projects in the portfolio are in the climate change focal area, representing 62 percent of GEF total investment in private sector grant projects. Biodiversity projects are also a popular focal area in the private sector portfolio (13 percent). Though multifocal projects only represent 7 percent of private sector projects, they actually receive 18 percent of GEF investment.

Similar to the trend observed in the private sector grant portfolio, the bulk of the nongrant portfolio is dominated by climate change projects (79 percent). In reviewing a sample of completed nongrant projects, only 7 of 41 projects were not climate change-focused. In a sample of ongoing projects, there is a relative increase in non-climate change projects (9 out of 29).

According to focal area distribution by replenishment period, the percentage of climate change projects as a proportion of the private sector grant project portfolio rose in GEF-5 to 76 percent since shrinking from GEF-2 to GEF-4, but has dropped again in GEF-6 to 65 percent. GEF investments as a proportion of the private sector grant project portfolio also dropped to 38 percent. Multifocal area investment increased dramatically

FIGURE 3.11 Focal area distribution of private sector projects

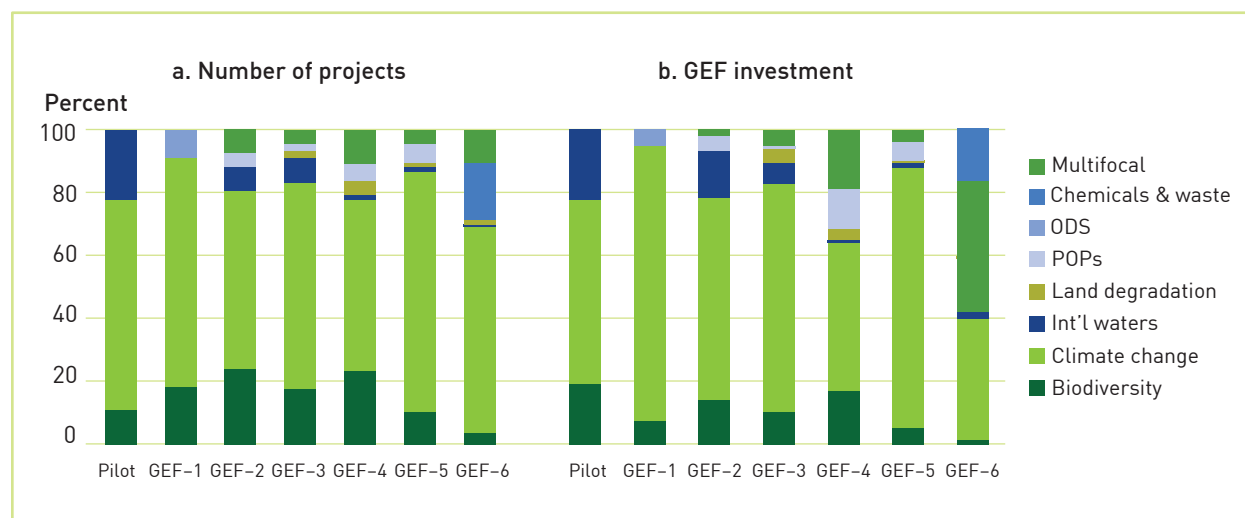
SOURCE: GEF Project Management Information System.

in GEF-6, making it the most invested-in area in GEF-6 (41 percent). In GEF-6, chemicals and waste also featured prominently. Sixteen chemicals and waste projects, representing 19 percent of the private sector grant portfolio in this period, were implemented (figure 3.12).

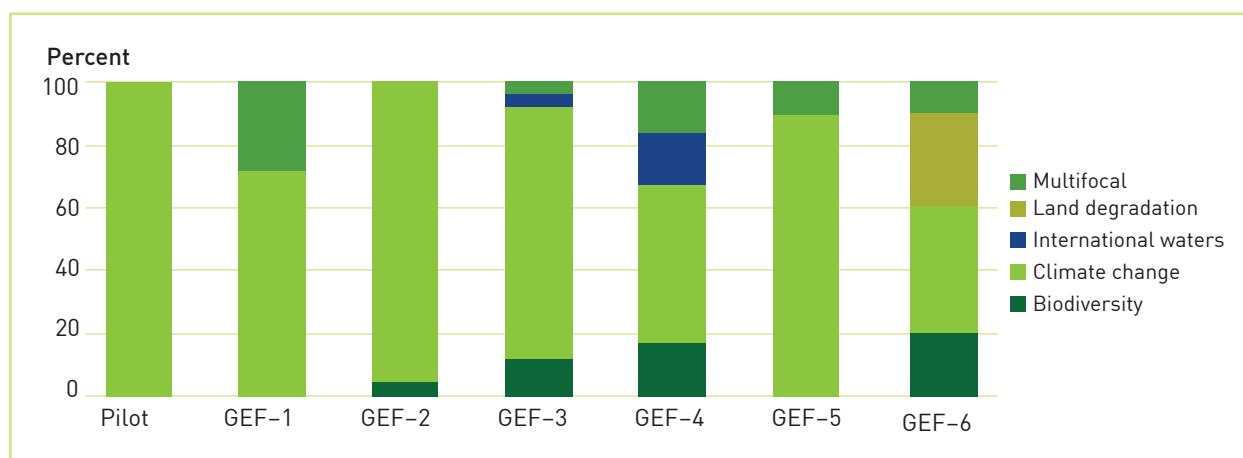
For the nongrant projects focal area distribution (figure 3.13), in GEF-6, more nongrant projects

than ever are diversified to different focal areas other than climate change. In particular, land degradation and biodiversity projects together represent 50 percent of the nongrant portfolio.

To further understand private sector focal area distribution, investment volumes in these focal areas are analyzed against the broader GEF portfolio. As illustrated in figure 3.14, climate change

FIGURE 3.12 Focal area distribution of private sector grant portfolio, by replenishment period

SOURCE: GEF Project Management Information System.

FIGURE 3.13 Focal area distribution of nongrant portfolio, by replenishment period

SOURCE: GEF Project Management Information System.

projects involving the private sector represent 32 percent of total GEF investments in this focal area. Chemical and waste projects with private sector engagement constitute 62 percent of the GEF overall investment in this focal area.

Some examples of GEF activities to mainstream private sector engagement beyond climate

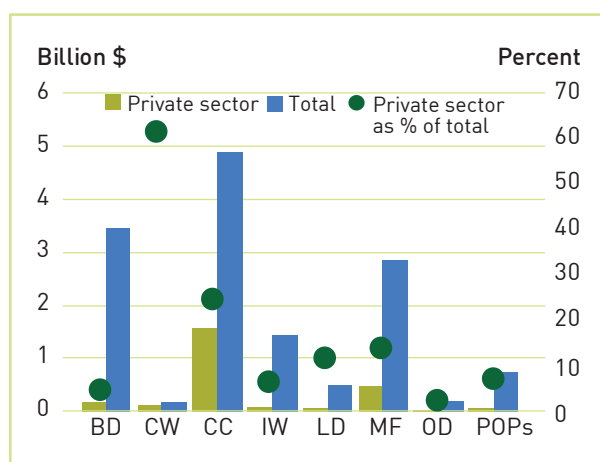
change in GEF-6 projects are presented in box 3.2.

Geographically speaking, projects involving private sector entities are evenly spread out. Based on the private sector grant portfolio (figure 3.15), projects are most concentrated in Asia and Africa with regard to both investment dollars and numbers of projects. Asian projects are also attracting the largest amount of cofinancing among all regions indicated by the bubble size. Regional projects are smallest in terms of GEF investments and number of projects.

Global projects are heavily funded in GEF-6, making them the first in the amount of GEF total investment (31 percent) in this period to date. Most regions are receiving more or about the same amount of GEF grants in GEF-6 compared to previous cycles, except regional projects. Figure 3.16 shows these shifts.

Regarding the nongrant portfolio, the greatest number of projects have been implemented in Europe and Central Asia (figure 3.17).

In GEF-6, no nongrant projects have been approved in Europe and Central Asia to date.

FIGURE 3.14 GEF portfolio investments, by focal area

SOURCE: GEF Project Management Information System.

NOTE: BD = biodiversity. CC = climate change. CW = chemicals and waste. IW = international waters. LD = land degradation. MF = multifocal. OD = ozone depletion.

BOX 3.2 Examples of GEF-6 private sector engagement projects

Sustainable Land Management for Increased Productivity in Armenia (SLMIP; GEF ID 8005, GEF grant: \$3,937,500; cofinancing: \$29,473,000). Using geographic information systems resource mapping exercises and market analysis, potential economic opportunities derived from landscape restoration actions will be identified. The funding will support a number of demonstration actions that facilitate the establishment or strengthening of local associations and cooperatives and market the selected wild products. The project will also develop a collaboration framework with the Armenian National Agrarian University and the Environmental Research and Management Centre to undertake several policy analyses. The results of this review will be presented at a national seminar on supportive policies for sustainable agriculture in the Armenian rural landscapes.

Demonstration of Mercury Reduction and Minimization in the Production of Vinyl Chloride Monomer (VCM) in China (GEF ID 6921, GEF grant: \$16.9 million; cofinancing: \$99 million). China's total mercury usage is about 1,200 tons/year, which accounts for about 50 percent of the world's total usage. The emission and release of the mercury in China could cause local, regional, and global impact. With its high mercury consumption and high risk of mercury pollution, the VCM industry is the key Chinese industry targeted for prevention and control of mercury pollution under the Minamata Convention.

The main objective of this project is to demonstrate mercury-free technology and promote Best Available Technique/Best Environmental Practice to reduce mercury release and emission from existing VCM facilities. With GEF intervention, mercury-free technology demonstrations, essential for China's mercury phaseout, will be carried out. This project will make full use of GEF funding to seed, catalyze, and leverage capital ventures and thus encourage enterprises to carry out independent research and development and manufacturing demonstrations. In total, the project aims to reduce 360 tons of mercury.

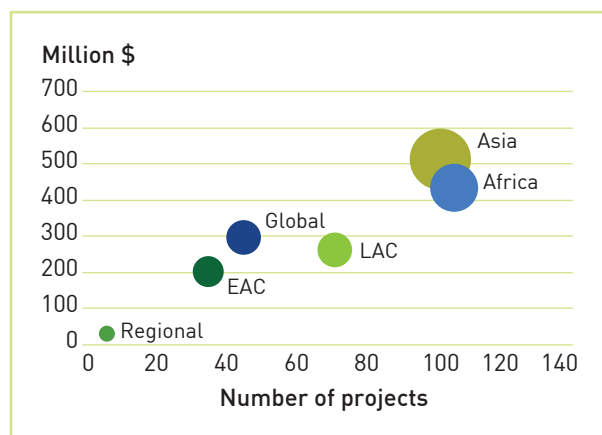
Implementation of the Strategic Action Program of the Gulf of Mexico Large Marine Ecosystem (GEF ID 6952, GEF grant: \$12.9 million; cofinancing: \$124,210,000). The project aims to conserve and restore the quality of the coastal and marine ecosystem in the Gulf of Mexico through community involvement and enhanced bilateral cooperation. One of the barriers identified in the baseline is that there is very limited dialogue between the government and the private sector, which hinders the effective implementation of ecosystem-based management approaches. Industries, manufacturing, tourism, and operators responsible for wastewater discharge have to take part in the dialogue for the project to succeed. This project will provide a number of trainings to raise the awareness in the private sector and fishing communities of the long-term benefit of ecosystem-based management and enhance the cooperation between the public and private sectors.

Meanwhile, there are more regional projects observed in GEF-5 and GEF-6, representing a significant increase from previous cycles. In GEF-6 (figure 3.18), the nongrant set-aside is not subject to the same programming constraints and country allocations as other GEF resources.

3.4 Performance of the private sector portfolio

Of the 460 total projects in the private sector portfolio, 140 projects have terminal evaluations available for review as of October 31, 2016. Of these, 123 projects were rated on outcomes, 118 were rated on the likelihood of sustainability, and

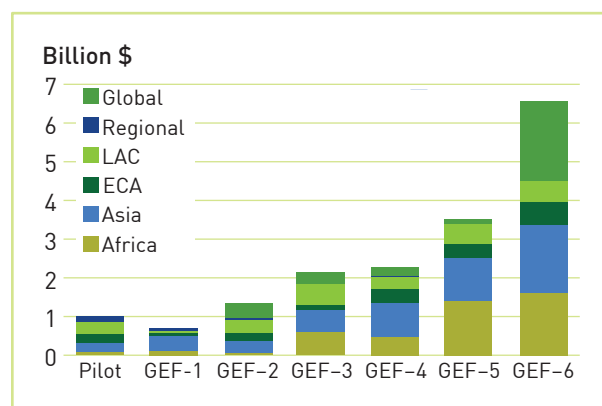
FIGURE 3.15 GEF investment in and number of private sector grant projects, by region



SOURCE: GEF Project Management Information System.

NOTE: ECA = Europe and Central Asia; LAC = Latin America and the Caribbean. Bubble size is proportional to cofinancing volume.

FIGURE 3.16 Regional distribution of GEF investment in private sector grant projects, by replenishment period

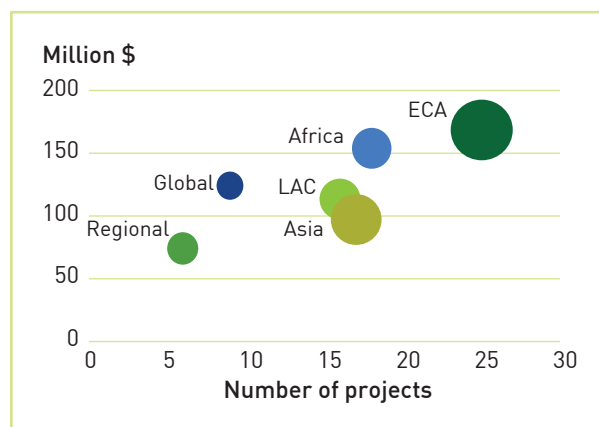


SOURCE: GEF Project Management Information System.

85 were rated on efficiency as of September 30, 2016.

From the outcome perspective, both the private sector grant and nongrant portfolios are comparable to the performance across all GEF portfolios as per the Annual Performance Report 2015. Overall, 80 percent of private sector grant projects are rated as moderately satisfactory or

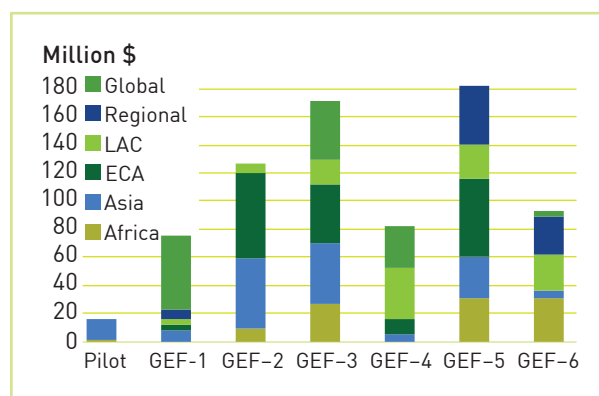
FIGURE 3.17 GEF investment in and number of nongrant projects, by region



SOURCE: GEF Project Management Information System.

NOTE: ECA = Europe and Central Asia; LAC = Latin America and the Caribbean. Bubble size is proportional to cofinancing volume.

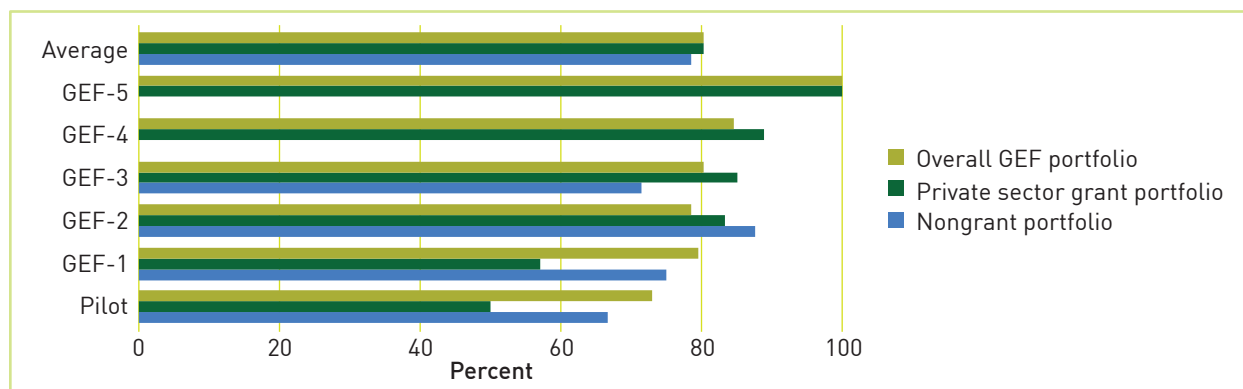
FIGURE 3.18 Regional distribution of GEF investment in nongrant projects, by replenishment period



SOURCE: GEF Project Management Information System.

above, while, 78 percent of the nongrant projects are in the satisfactory range. According to figure 3.19, the performance of the private sector portfolio indicates improvements in outcomes achievement since the pilot phase. Although only 10 private sector projects were rated in GEF-4 and GEF-5, 9 of them receive moderately satisfactory or above ratings.

FIGURE 3.19 GEF portfolios rated moderately satisfactory or above project outcome ratings, by replenishment period



SOURCE: GEF Project Management Information System.

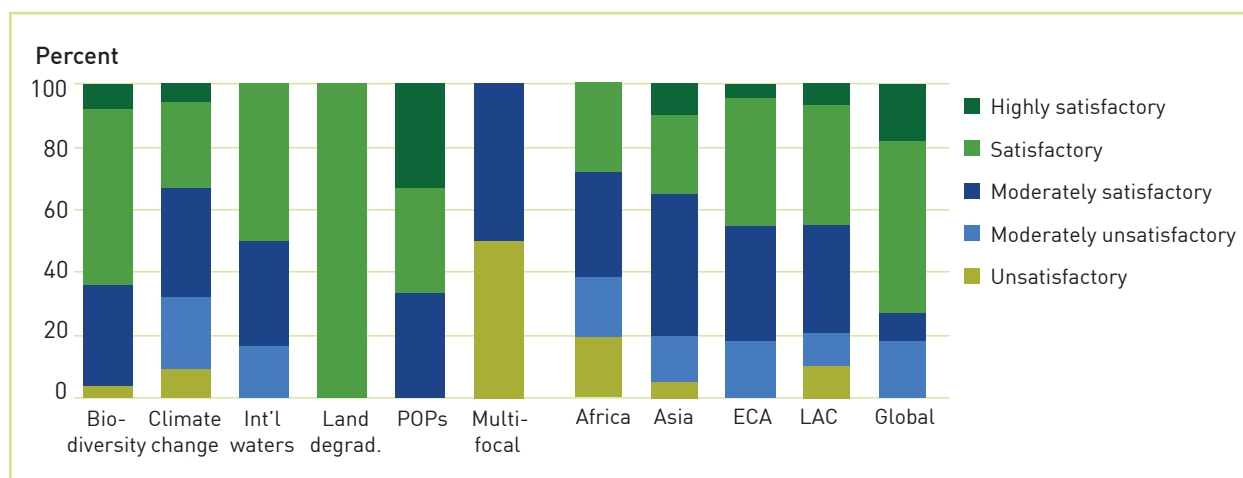
NOTE: In GEF-5, only five projects in the overall GEF portfolio were rated in the 2015 Annual Performance Report. All of them received moderately satisfactory or above ratings. One of these projects involved private sector engagement, making the rating performance 100 percent for both the private sector grant portfolio and the overall GEF portfolio.

From the outcome perspective, no global projects or projects in Europe and Central Asia are rated as unsatisfactory or below, indicating stability and solid performances in these regions (figure 3.20). Particularly, global projects have the most satisfactory performance, with 67 percent of projects receiving satisfactory or above ratings. On the other hand, 35 percent of African projects

have moderately unsatisfactory or below ratings, the highest percentage in this category among all regions. In terms of focal area, aside from one project, all biodiversity projects received ratings in the satisfactory range.

On the measures of sustainability and efficiency (figures 3.21 and 3.22), the differences between

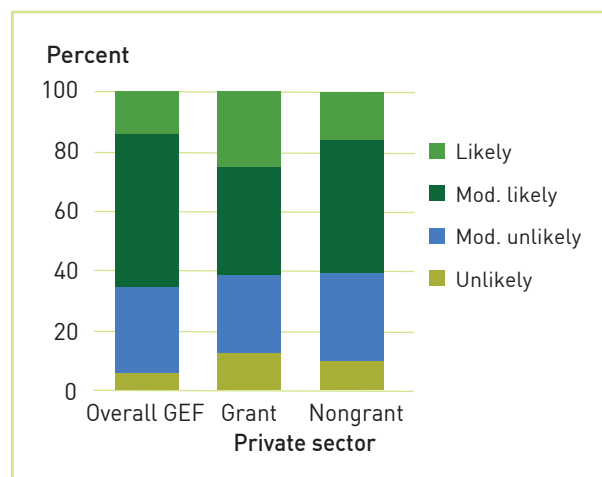
FIGURE 3.20 Private sector portfolio project outcome ratings, by region and focal area



SOURCE: GEF Project Management Information System.

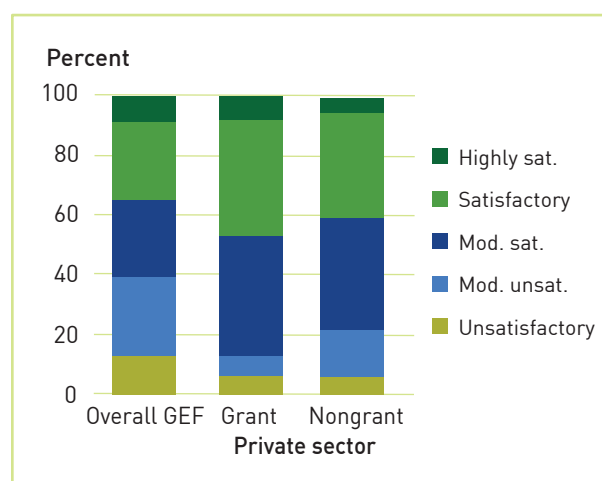
NOTE: ECA = Europe and Central Asia; LAC = Latin America and the Caribbean.

FIGURE 3.21 Distribution of ratings on sustainability of outcomes for overall GEF and private sector portfolios



SOURCE: GEF Project Management Information System.

FIGURE 3.22 Distribution of ratings on efficiency of projects for overall GEF and private sector portfolios



SOURCE: GEF Project Management Information System.

the private sector portfolios and the overall GEF portfolio are, on average, negligible. Sixty-one percent of the private sector grant projects and 65 percent of the nongrant projects had ratings of moderately likely or above on the sustainability of outcomes compared to 60 percent of

the broader GEF portfolio. Similarly, 88 percent of private sector grant projects and 76 percent of overall GEF projects were considered to be Moderately Satisfactory or above on efficiency. The ratings on efficiency for nongrant projects do show some difference, with the nongrant projects having lower ratings on this parameter. However, since the sample size is not large enough, this cannot be interpreted as a clear trend.

ENVIRONMENTAL OUTCOMES

As indicated by the performance ratings, the vast majority of GEF projects that engage the private sector have outcomes that are considered satisfactory and above. To provide an illustration of what these results look like from an environmental perspective, note the IEO OPS6 studies on Review of GEF Support for Transformational Change and Impact of GEF Support on National Environmental Laws and Policy Reform in Selected Countries (GEF IEO 2017b, 2017a), which examined the GEF's past experience with a representative sample of projects that are transformational because of their relevance in addressing a global environmental concern, their deep and large-scale impact, and their expected long-term sustainability. Among the initiatives highlighted in those studies are the following:

The Lighting Africa program

Created to transform the off-grid market by removing barriers, its goal was to help catalyze markets for quality, affordable, clean, and safe off-grid lighting, and ultimately to create a sustainable commercial platform that would realize the vision of providing 250 million people with modern off-grid lighting by 2030. The overall approach was to demonstrate the viability of the market by providing market intelligence; improve the enabling environment by developing a quality assurance infrastructure; facilitate

business-to-business interactions; help governments address policy barriers; provide business development services; and facilitate access to finance for manufacturers, local distributors, and other stakeholders. The program received about \$22 million in donor contributions from 2007 to 2013. The GEF was the largest donor, providing more than one-third of the funds (\$7.85 million, GEF ID 2950) (IEG 2015). In 2014, the final evaluation of the Lighting Africa program concluded that the program had played a crucial role in transforming the market (Castalia Strategic Advisors 2014). The program was effective and made an impact. A few of the key accomplishments follow:

Through the program's quality assurance efforts, 183 solar lamp models were tested, and 66 of them received the Lighting Africa quality certification.

- The program hosted 1,157 forums during its consumer education campaigns, directly reaching over 36,000 people in Kenya.
- Over 680,000 Lighting Africa-certified lamps were sold in Kenya, 135 percent above the Kenya program's target. Furthermore, almost 2 million lamps were reported to have been sold in other African countries—185 percent above the target.

The evaluation also concluded that the benefits achieved by the program were sustainable after donor funding had stopped. Interviews suggested that people who have used solar lamps would continue to do so and that suppliers would continue to supply. The extent to which the market transformation process itself will continue, however, remains to be seen. While the program has laid the groundwork for continued market transformation through arrangements with an industry association and a Kenyan NGO to take over and continue the program activities, these organizations are still partially reliant on donor support.

Creating the Wind Power Market in Uruguay

Around the turn of the century, Uruguay's power system had been fully dependent on hydropower and imported fossil fuels. Since the country's hydropower potential was practically exhausted, imported natural gas was expected to play a major role in meeting the growth of electricity demand, estimated at about 3 percent annually. At this point, in 2007, the Uruguay Wind Energy Programme was launched with the objective of contributing to the elimination of the existing barriers to the development of commercially viable wind energy investments and the establishment of a 5 MW demonstration project. The project budget was about \$7 million, of which \$1 million was from the GEF (GEF ID 2826) and \$35,000 from UNDP, with government cofinancing of \$6 million.³

The project was designed with activities expressly aimed at removing each of the identified barriers. Specifically, the Uruguay Wind Energy Programme supported the creation of an enabling policy framework for wind energy, including regulations for construction and operation of wind farms, access and dispatch to the network, technical codes, and financial incentives. It strengthened capacity and business skills to prepare and implement wind energy technology with public and private delivery models. It also addressed technological barriers through the provision of measuring equipment and the implementation of a pilot 5 megawatt wind power plant connected to the grid.

Following the program's closing in 2012, the final evaluation report (Rodríguez 2013) concluded that

with the decisive participation of this project, an enabling legal and regulatory framework was established for the development of wind energy

³ The project was also supported by GEF project preparation grants of \$0.50 million.

in the country. A transparent market for wind power was created, and 43.45 MW have been introduced in the country through December 2013, and several projects are in development which by December 2015 were expected to total 990 MW, far exceeding project goals and converting wind power into a major energy source for the country.

The directly avoided carbon emissions were estimated to have risen to 0.86 million tons of carbon dioxide per year in 2015, from zero in 2007. As discussed in the final evaluation, the sustainability of these achievements is rated as probable, given the technical and institutional capacity that were developed and the credible financial sustainability of the investments.

Integrated Solid Waste Management Project (POPs)

The focus of the project was on packaging and loading polychlorinated biphenyl (PCB)-containing transformers and pumping out liquid PCB transformer oil from a landfill. Concerning the PCB disposal, 75 percent of the cost was borne by the GEF grant and the remaining 25 percent was borne by the private sector (PCB operation owners).

The following are the main regulations developed. A number of technical codes of common practice were also developed to monitor persistent organic pollutants (POPs):

- National Plan of Implementation of the Obligations of the Republic of Belarus under the Stockholm Convention on Persistent Organic Pollutants in 2011–2015
- Regulation of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus on the Procedure of Maintenance of the Uniform Database on Persistent Organic Pollutants

Overall, from 2010 to 2013, about 3,000 tons of POPs stockpiles and waste were recovered and packaged; about 1,800 tons have already been destroyed; and about 1,000 tons of the remaining stockpiles have been stored at a secure location, eliminating POPs-associated health risks for 116,000 people and reducing PCBs by 17 percent. In addition to the tonnage of POPs removed, awareness for risks associated with POPs was increased among adjacent communities and a number of new legislative acts, strategies, and programs in the area of POPs management were developed and approved.

LESSONS LEARNED

One of the GEF's methods of generating actionable knowledge and learnings from its portfolio is through lessons learned. Some lessons learned from the batch of 19 terminal evaluations received from projects in GEF-4 and GEF-5 include the following:

Funding and financial planning

While lessons specific to funding and financial planning arose only 32 percent of the time within the projects, every single project rated below satisfactory has mentioned financing in its terminal evaluation. In the Strategic Program for West Africa (SPWA-CC): Promoting Renewable Energy Based Mini-Grids in Rural Communities for Productive Uses in Côte d'Ivoire (GEF ID 4005), the program was not able to secure the \$3 million originally planned from the West African Development Bank. In the end, the project had to move from a market-based approach to a community-based approach and shifted its activities to building the capacity of villagers from pilot site demonstrations. Nevertheless, the project installed 215 kilowatts of photovoltaic power systems and connected 728 households to photovoltaic mini-grids, thereby reducing

greenhouse gas emissions from those households by substituting photovoltaic electricity for diesel-generated energy.

Similarly, with Promoting Energy Efficiency Technologies in the Beer Brewing Sector in Burkina Faso (GEF ID 4285), the African Export-Import Bank pledged \$500,000 in soft loans at the time of the CEO endorsement of the project, representing 68 percent of the total cofinancing. However, the interest rates that the bank offered on the soft loans were not competitive, leading to its withdrawal from the project. As a result, the actual levels of cofinancing were significantly lower than expected. The lessons learned section of the terminal evaluation concluded, “Co-financing without a firm and clear commitment from the other stakeholder can seriously undermine the implementation of a programme.”

Capacity building

Technical support to the private sector can help overcome the problem of low capacity, catalyze investments, and facilitate market change. A pilot financing mechanism for wastewater infrastructure was established in Guyana (Testing a Prototype Caribbean Regional Fund for Wastewater Management [CReW], GEF ID 3766). This Guyana Wastewater Revolving Fund targets both private and public operators of wastewater treatment works. Despite government efforts to attract interest from the private sector, there was no expression of interest in the fund. The terminal evaluation indicated that a significant lack of awareness and capabilities restricted small private sector companies from providing compliant technical and financial proposals. When dealing with small private sector firms, projects should provide more capacity building in preparing proposals and adopt a more flexible and innovative approach to the loan conditions. While the project has not generated any data on marine

environment to indicate possible improvements (and to date, there is limited completion of wastewater treatment works), the expectations are that all investments on wastewater will lead to improvements to health, marine (and terrestrial) environments, and livelihoods through improved fish stocks, tourism benefits from enhanced water quality, and ecosystem status.

Stakeholder engagement

Lessons on stakeholder engagements are shared by 68 percent of the projects reviewed. Designing a project linking the private sector and various institutions has the potential of generating huge benefits of sustainability. As shown in Mainstreaming Biodiversity Management into Medicinal and Aromatic Plants (MAP) Production Processes in Lebanon (GEF ID 3418), the project chose to work with various institutions of different levels, local collectors, middlemen, and traders. This engagement empowered these public and private entities by providing experience and training, and also by developing effective ownership and participation, thereby promoting long-term sustainability of the project. The project has developed and introduced eight products to the market, worked on 11 MAP species, and executed national distribution surveys and density assessments for three species. The status of two globally threatened MAP species improved as a result of good regeneration taking place at ground level. The project also established seven oregano cultivation demonstration plots across Lebanon to address the threat posed by unsustainable harvests to globally significant MAP species, by enhancing appropriate collection methods and strengthening the supply chain framework and value addition to MAP products.

Operating since 2008, the Earth Fund was an innovative pilot PPP initiative with a set-aside funding of \$50 million from the GEF. Five

platforms were approved under it: UNEP Efficient Lighting, UNEP–Rainforest Alliance cocoa industry, IDB–The Nature Conservancy water funds, UNEP–Conservation International conservation agreements, and the IFC Earth Fund Platform.

In August 2016, Ernst & Young completed an independent evaluation of the IFC Earth Fund Platform, which received 60 percent of the Earth Fund’s resources at \$30 million. The evaluation highlighted the value of an efficient wholesale business model that catalyzed private sector investments in tandem with advisory work and capacity building to promote risk-sharing and replicable, sustainable approaches for generating global environmental benefits. This collaboration allowed IFC to test and refine a model of blending GEF’s concessional finance with the IFC’s commercial finance and other private finance, leading to the creation of a blended finance unit in IFC that now offers concessional investments that go beyond a “one-off” intervention and integrate with IFC’s mainstream investment activity.

The achieved environmental benefits are available for nine Earth Fund projects (four investment services, five advisory services). To date, 96 percent

of targeted greenhouse gas emission reduction has been achieved (3,135,924 tons/year). Total water use reduction has exceeded the target to 160 percent (15,033,789 cubic meters/year). It should also be noted that environmental benefits to date reflect only a portion of the project portfolio, as some results are not yet available. In this context, the total amount of environmental benefits achieved by the Earth Fund Platform may even more highly exceed original targets if the other portion of the portfolio performs at or above target levels.

The evaluation concluded that IFC had met its goal to reach a leverage ratio of above 1:3 and achieved an actual leverage of 1:26 disbursing all funds allocated for the platform. There were 14 IFC Earth Fund Platform projects, consisting of 9 advisory services in projects and 5 investment services in projects. Advisory services supported research, consulting, capacity building, and training. Investment services included loans, risk-sharing facilities, and equity. Several lessons also emerged from the terminal evaluation of the individual IFC Earth Fund Platform projects (box 3.3). More information on the Earth Fund is available in [annex J](#).

BOX 3.3 Lessons learned from the IFC Earth Fund Platform

Selecting the right partner is crucial to project success. Particularly, professional associations can be a meaningful lever for engaging with industry stakeholders. These professional or industry associations help provide credibility and allow access to relevant industry contacts and organizations. Furthermore, their existing outreach activities can be leveraged by the project in its engagement or awareness-raising activities, leading to more impact. In the Green Power for Global Mobile II project, collaborating with the association of mobile operators has been vital to engaging industry stakeholders. Similarly, in Industrial Energy Efficiency in Ecuador (GEF ID 4147), the collaboration with several chambers of industry secured additional cofinancing from the private sector.

Confirming knowledge related to the current market, regulatory context, and project context is up to date before launching a project or allocating funds helps ensure its success. A few projects faced difficulties related to market and regulatory context, which could potentially have been avoided if the ongoing validity of the project context was challenged and the project consequently adjusted. One example is the Mexico Sustainable Energy Finance project, for which additional preliminary studies may have helped identify in advance the challenging context of the Mexican banking sector. The SPWA-CC: Promoting Renewable Energy Based Mini-Grid for Rural Electrification and Productive Uses project (GEF ID 3959) faced baseline information error, which could have been better studied and considered in the project design phase.

In some cases, projects faced challenges because the market was not sufficiently mature. Certain projects faced challenges due to market conditions, notably an insufficiently mature market. For example, the Cleantech Innovation Facility faced challenges in identifying eligible projects; this appears to be partly due to Cleantech markets not being mature enough in the targeted countries, leading to a very limited pipeline of deals.

4: Assessment of GEF nongrant instruments

Nongrant projects in the GEF refer to projects in which GEF financing is used in products and mechanisms that have the potential to generate financial returns, regardless of whether such returns accrue to the GEF. Nongrant instruments are negotiated under the principle of minimum concessionality when it comes to the private sector, or provided on terms comparable to that of the International Development Association in the case of the public sector (GEF 2014g). The GEF financing could be provided as a contingent grant, with no expectation of repayment, or as concessional finance, with an expectation of reflows.

4.1 Nongrant instruments

The GEF uses a broad spectrum of nongrant instruments. The types of financial mechanisms that have been utilized fall into three broad categories:

- **Loans**—including hard loans, concessional loans, contingent loans, and revolving funds
- **Guarantees and risk mitigation**—such as credit, risk, or performance guarantees
- **Equity investment**—either direct participation in a company or through a fund

EVOLUTION OF INSTRUMENTS

Nongrant instruments were mentioned formally in GEF-2. In 1999, to respond to the Council's

request for a review of modalities to facilitate private sector involvement in GEF activities, the Secretariat prepared the paper "Engaging the Private Sector in GEF Activities" (GEF 1999). This paper identified several modalities that would be needed for barrier removal, including technical assistance and a range of nongrant financing modalities. In GEF-4, a new strategy to enhance engagement with the private sector was finalized considering the newly adopted Resource Allocation Framework (RAF). The 2006 strategy envisioned "strategic use of nongrant/risk mitigation instruments" as one of the main instruments, together with the Public-Private Sector Partnership Fund and knowledge management tools to achieve the goal (GEF 2006b). At this time, the GEF Earth Fund was established with delegated authority to IFC and other Agencies to prepare and approve grant and nongrant projects more quickly in line with private sector expectations.

In 2011, another strategy paper was developed for building public-private partnerships and attracting greater private sector financing. In total, the GEF-5 private sector set-aside amounted to \$80 million, focusing entirely on providing catalytic financing through the use of nongrant instruments. Drawing on this and other previous experience, the GEF launched a \$110 million pilot program in GEF-6 to demonstrate and validate the application of nongrant financial instruments to combat global environmental degradation. The

pilot program also required that project proposals generate reflow.

Nongrant instruments allow the GEF to better meet the evolving and differentiated needs of recipient countries and can help overcome financial constraints and technological risks to better support technology transfer and the “greening” of major infrastructure. They lend themselves to tailored structuring, allowing a better alignment of mitigation measures to the risk being covered, not only helping to ensure the principle of minimum concessionality but also minimizing market distortions. Financial support from the GEF enables agencies to provide soft loans to middle-income countries, which are not eligible for the MDBs’ concessional windows. The GEF’s past experience (GEF IEO 2014) suggests that nongrant instruments can make an important contribution to the achievement of the GEF’s objectives.

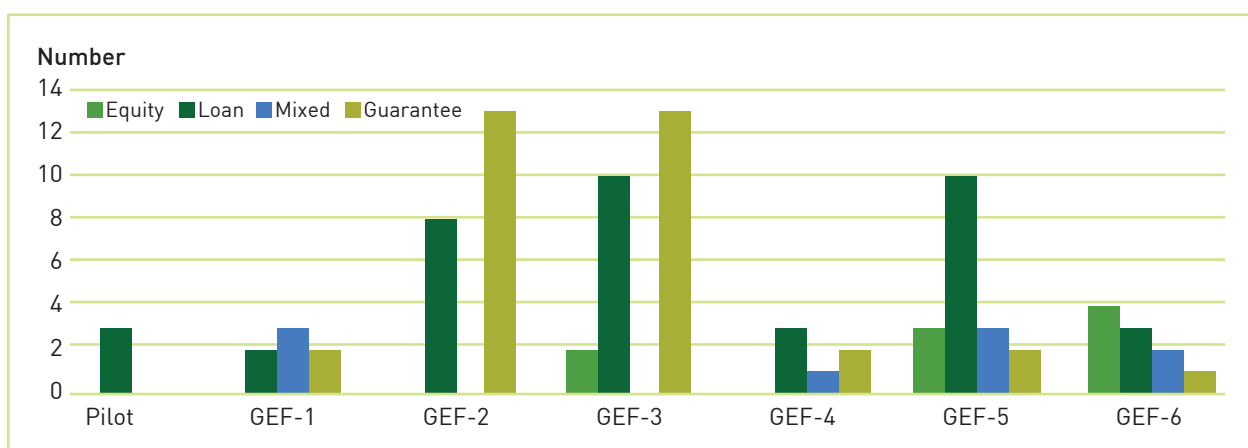
The use of nongrant instruments also increases the attractiveness of GEF projects to private sector partners, attracts larger cofinancing, and may be appropriate where incremental costs eligible for GEF funding have the potential to generate recoverable revenues or cost savings,

or where there is a global public good associated with incremental risk that private investors are unwilling to assume. GEF funding offers unique advantages, such as flexible risk positions, longer term lengths, and concessional rates, that make GEF investment an attractive addition to equity funds and other financial mechanisms. Of course, some private sector partners would be pleased to accept the GEF funding as a straight grant, with no return or reflows. But for the GEF, a virtue of nongrant instruments is that proceeds (i.e., reflows) from these projects are available to expand the pool of GEF resources available for future investments. The returns include recovery of principal, earnings or interest, dividends, proceeds from the sale of equity, and repayment of any reserves and fees.

INSTRUMENT REVIEW

The variety of instruments used by the 91 projects is shown in figure 4.1. Furthermore, most projects included technical assistance and capacity-building components generally provided on a grant basis.

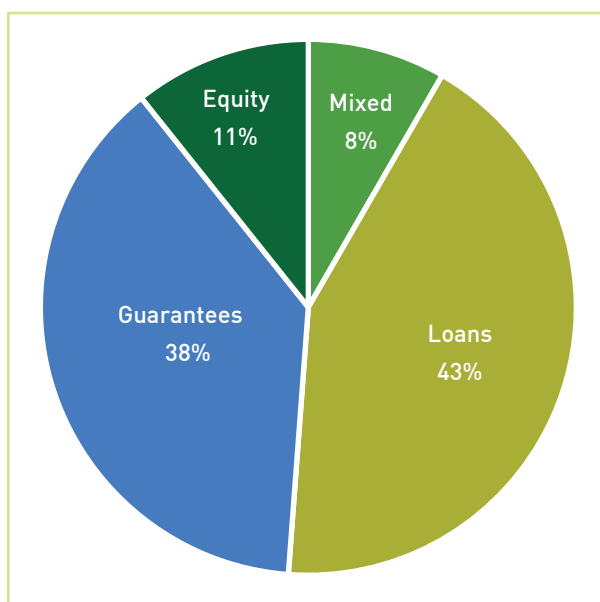
FIGURE 4.1 Number of nongrant instruments, by replenishment period



SOURCE: GEF Project Management Information System.

Historically, loans and guarantees have been the most commonly used nongrant financing vehicles. In particular, revolving funds for small-scale lending were the most used nongrant modality, followed by credit guarantees; often these tools were used in combination. As shown in figure 4.2, with more nongrant projects investing in environmental funds in GEF-6, there is a rise in the use of equity instruments.

FIGURE 4.2 Frequency of use of different nongrant vehicles



SOURCE: GEF Project Management Information System.

Seventy projects were desk-reviewed in-depth for assessment of nongrant instruments used.¹ Among the 70 projects, only 9 projects did not have a technical assistance component. Technical assistance, when included, is almost invariably financed by the GEF. This suggests that other financiers in GEF projects either are not interested in financing technical assistance or are

unable to do so on comparable (i.e., grant) terms. Yet technical assistance is an indispensable part of the project—suggesting that this may be one area of the GEF’s comparative advantage. Table 4.1 provides a distribution of the use of instruments by type in the sample of projects reviewed.

Loans and guarantees were the most commonly encountered nongrant financing vehicles; in the completed projects sample, only three involved equity investment. In some cases, the GEF financing was akin to a capital grant to fund demonstration projects or provide an initial capitalization of a fund. The revolving fund structure continues to be popular. Occasionally, instruments are designed to provide incentives ex post, such as performance bonuses. One project includes an insurance feature.

Loans

Debt instruments were used in 20 projects in the sample of completed projects and used 12 times with the ongoing projects (table 4.1). The GEF funding is sometimes used to provide loans and sometimes used in a blended structure with other finance provided by the executing agency or the financial intermediary. The concessionality could be a lower interest rate, a longer maturity, or a subordinated position.

Loan facilities reviewed in both samples sometimes take the form of a revolving fund (see below) and generally involve some form of subordination. They are also often provided in conjunction with an MDB facility, which takes a more senior position. The EBRD Russian Federation Green Shipping Program (GEF ID 5530), for example, blends subordinated GEF financing with an EBRD senior loan, with returns for the GEF portion limited to LIBOR (London Interbank offered rate) plus a margin of 75 basis points.

¹Originally 73 projects were examined: 43 completed and 29 ongoing; however, as 2 of the 43 were canceled projects, they were removed from the analysis.

TABLE 4.1 Number of nongrant instruments in a sample of completed and ongoing projects

Project status	Period	Total	Guarantee	Loan	Equity	Technical assistance
Completed	Pre-GEF-4	56	13	15	3	31
Completed	GEF-4	6	8	5	0	10
Ongoing	GEF-5	19	5	5	3	17
Ongoing	GEF-6	10	2	7	4	5

SOURCE: GEF Project Management Information System.

NOTE: Because multiple instruments are used in a single project, totals do not necessarily sum to the total sample size.

Reflows are expected to recover a portion of the financing provided.

The GEF-6 EBRD Green Logistics Program (GEF ID 9047) is another example of a blended finance facility where the GEF financing is subordinated to and earns a lower return than the EBRD funds provided. The justification provided in the project document is to “allow the EBRD to take a senior position and invest its own funds in projects that otherwise would be priced excessively for the clients to take the risks, thus attracting other investors and leveraging the EBRD’s capacity to deliver energy efficiency solutions in the logistics sector in the region and to help clients to introduce best practices.”

An unusual and interesting use of a loan structure is represented in the proposed World Bank Third South West Indian Ocean Fisheries Governance and Shared Growth Project (GEF ID 9563) in GEF-6. Here, the GEF’s loan is provided on highly concessional, International Development Association–like terms, to be used as support and credit enhancement for a Blue Bond to be issued by the government of Seychelles; a World Bank guarantee is also foreseen to further increase creditworthiness. This is the only case in both samples of the use of GEF funds to credit-enhance a capital market transaction, and the Blue Bond is itself a relatively new instrument that follows the successful Green Bond pioneered by the World Bank almost a decade ago.

Revolving funds

This is a commonly encountered structure in GEF nongrant projects, more so with UN Agencies. Essentially, it involves “seeding” a facility with funds that are then provided for eligible activities; repayments, including any interest and fees, go back to the facility and are available for reuse. The revolving fund continues until it is used up or until the end of the project, at which time it is maintained by the beneficiary or wound up with proceeds allocated to another use. Such funds are often placed within national development banks or governmental agencies. The funds are usually provided to the final beneficiary as loans.

Under GEF-6, a revolving fund–type structure is employed in the African Development Bank’s Investing in Renewable Energy Project Preparation under the Sustainable Energy Fund for Africa (GEF ID 9043). This project provides technical assistance, capacity building, and investment capital to support private investments in sustainable energy in Africa. One financing modality is the project preparation grant, reimbursable when the project reaches financial closure, thereby creating reflows that improve the facility’s financial sustainability. The GEF financing is to be used to finance such project preparation grants, with GEF reflows occurring at the end of the implementation period. Given that not all projects will reach financial closure, reflows are unlikely to recover principal.

Guarantees and risk mitigation

These instruments are used in conjunction with loans and are typically structured to cover first loss tranches in financial intermediary credit. The usual guarantee structure consists of coverage of individual projects up to a certain amount of the loss, up to a certain amount of the portfolio (thus, this instrument is often called a risk-sharing facility). The GEF financing typically covers any losses under the guarantee. Some projects foresee collection efforts on the part of the financial intermediary, but in general, once the guarantee is called, the amount is treated as a grant in the completed projects sample. The first use of this instrument dates from 1997, in the Hungary Energy Efficiency Cofinancing Program executed by IFC (GEF ID 111). The rationale for the guarantee is to overcome financial intermediary perception of risk in lending to the activity in question by providing a risk-sharing mechanism; technical assistance is an integral part of such projects (there are only two projects in both samples where this is not the case).

The guarantee appears to have gone from patchy use in the pre-GEF-4 period (13 out of 33 terminal evaluations) to greater popularity in GEF-4 (8 out of 10 completed projects) before declining in GEF-5 (5 out of 19 projects) and GEF-6 (only 2 out of 10 projects; see table 4.1).

The evidence on the effectiveness of the guarantee instrument is mixed. Of the 21 projects with a guarantee feature in the completed sample, at least 9 indicate that the risk-sharing facility was not used or “did not take off.” It is very likely that there are more projects in the samples that would deliver a similar conclusion, but the documentation available does not squarely address the issue.

The Poland Energy Efficiency Project (GEF ID 786), approved in 2004 and executed by the World

Bank, included a partial credit guarantee; the project was restructured because of very limited demand from banks for the guarantee. The terminal evaluation concluded that the guarantee instrument was not critical for energy efficiency lending; rather, the lack of creditworthiness of the client was the major constraint. Another World Bank project, the Croatia National Power Utility Project (GEF ID 944), also found that there was little demand for a risk-sharing facility: Public sector clients proved to be of low risk, while private sector clients suffered from a lack of borrower creditworthiness.

In other cases, the guarantee appears to have been highly successful in expanding energy efficiency lending. The China Utility-based Energy Efficiency Finance Program (GEF ID 2624) is a case in point (IEG 2010). In at least five other cases, the guarantee was used with minimal or no losses—proving the soundness of the business case and the underlying premise. Overall, the takeaway, cited in many terminal evaluations, is that success in one country is not necessarily replicable in another, and depends on a variety of factors that cannot be addressed by structuring alone.

No clear conclusion can be drawn with regard to the evolution of the structure of the guarantee. First loss cover ranges from a low of 40 percent of principal to a high of 90 percent; sometimes the cover is subject to absolute or relative limits (e.g., a dollar amount, or some percentage of the portfolio), and sometimes not (in one case, the entirety of the risk-sharing facility was used up in a single claim). Typically, a guarantee fee is charged and paid by the entity availing itself of the guarantee. Not all the projects reviewed spell out explicitly how the fee is to be charged and used. Where information is available, proceeds are used to cover operating expenses, paid as a fee to the

MDB or provider of the guarantee, or plowed back into the risk-sharing facility.

There appears to be a shift in regional focus in the use of the guarantee instrument over time: About half of the guarantees in the completed sample were in Eastern Europe, compared to a third in the ongoing sample; in Latin America and the Caribbean, guarantees grew from zero in the completed sample to two (out of six) in the ongoing sample. There also appears to be an institutional divide in the use of the guarantee: While UNDP accounted for a third of the guarantees in the completed sample, only one was included in a UN agency submission in the ongoing sample. Similarly, the regional development banks were largely absent in their use of this instrument (or any nongrant instrument, for that matter) prior to GEF-5, or, if they did indeed use such instruments, they have not yet provided terminal evaluations for the relevant projects.

The institutional differences also extend to how the guarantee is structured, with the MDBs generally structuring it in conjunction with credit lines provided to financial intermediaries. Even within the MDBs, there are differences. IFC's structuring involves more risk sharing with the financial intermediary concerned, for instance.

In GEF-6, only one project includes an explicit first loss feature: IDB's Risk Mitigation Instrument for Land Restoration (GEF ID 9277). This project also includes subordinated loans. These instruments would reduce risk to IDB's ordinary capital by assuming risky positions in projects' financial structures, enabling IDB and co-lenders to finance projects that they would normally be unable to, thereby leveraging equity investments and providing scale to projects. The project identification form does not provide many details on the exact financing mechanism, however.

Performance incentives

This instrument is not commonly encountered, having been used just four times in the completed sample and once in the ongoing sample. It involves the payment of a bonus, or some other monetary reward, upon successful achievement of pre-defined milestones. As such, performance bonuses reward good behavior ex post, creating incentives to stay on track. However, the limited number of projects utilizing this modality suggests that it is not considered particularly attractive.

Insurance

Only one project in both samples involved an insurance scheme. This was the Geothermal Energy Development Program in Europe and Central Asia (GEF ID 1615), approved in 2006 and executed by the World Bank. It included a geological risk insurance component to cover risks of exploration and operation of geothermal energy. Premiums were charged for both types of insurance. The insurance component paid out practically the totality of the allocation against claims during the project, but according to the terminal evaluation, this is a sign of success, as the component worked as designed. It is interesting to note that this project had a very long preparation period (58 months), attributed in part to revisions to design prompted by the GEF's desire to use financial instruments.

Equity

Equity is rarely encountered in the completed sample (3 projects out of 41), but is more prevalent in the ongoing sample (7 projects out of 29; see table 4.1). The GEF financing is used as a participation in an equity fund in most of the cases; direct equity investment is relatively rare. The earlier equity investments faced limited success, because of a misalignment of incentives

or difficulties in sourcing deals, high monitoring costs, and unclear exit strategies.

There is greater use of equity in the more recent projects, and proportionately more in GEF-6 than in GEF-5 (4 out of 10 projects versus 3 out of 19, respectively). Two unusual features can be observed in the GEF-6 batch of projects, compared to previous ones:

- ***Pari passu* structures.**² The African Development Bank Moringa Agro-Forestry Fund (GEF ID 9051) structures the GEF investment on a *pari passu* basis, as does IDB's Impact Investment in Support of the Implementation of the Nagoya Protocol on Access and Benefit Sharing Project (GEF ID 9058) and Conservation International's Meloy Fund Project (GEF ID 9370). This is the second appearance of such structuring in the samples.³ Interestingly, no explanation is provided for why a *pari passu* return sharing is proposed, and whether this is a realistic assessment of market requirements. It suggests an increased risk tolerance in the market such that GEF resources are not required for concessionality. It should be noted that in two cases, the GEF is providing finance

alongside impact investors—whose risk appetite may be similar to the GEF's and who may be motivated by similar environmental and social public good concerns.

- **Wide variety of instruments.** The IDB project foresees the use of a variety of instruments: mezzanine structures, with quasi-equity upsides (royalty streams, warrants, convertible notes); unique equity opportunities; and senior, subordinated, and/or other tailored debt instruments. The Conservation International project also foresees the use of debt and equity instruments, together with technical assistance. The flexibility in instruments will allow for a better tailoring of the financing to the needs of the project; an earlier manifestation of this principle was the IFC Earth Fund Platform.

Another use of equity can be seen in the GEF-6 South Africa Equity Fund for the Small Projects Independent Power Producer Procurement Programme (GEF ID 9085), implemented by the Development Bank of South Africa. The GEF financing is to support a broader government program to encourage SME (small and independent power producers) participation in the renewable energy market. An SME needs to provide a 10 percent equity stake in a project to qualify for 90 percent debt financing from the Development Bank of South Africa facility. However, the opportunity cost of the equity would render the structure unviable in the South African market. The GEF financing, by covering 50 percent of the required equity stake at a lower return, essentially beefs up the equity return for the SME investor. The GEF takes an unsecured equity position, but receives reflows from the dividend flow of the project. This structure adheres more closely to the role that GEF financing typically plays in the risk profile.

²*Pari passu* is a Latin phrase meaning "equal footing" that describes situations where two or more assets, securities, creditors, or obligations are equally managed without any display of preference.

³The EcoEnterprises Fund II (EcoE2) in GEF-5 was also a *pari passu* equity investment. In this case, the fund offered a subcommercial pro forma equity return in the region of 9–11 percent and was structured and managed in conjunction with The Nature Conservancy. The GEF participation was 25 percent of the fund's capital and was a key anchor investment because of the scarcity of investors targeting funds that offer a subcommercial return. This was also a case of progression from GEF grant funding for technical assistance for the smaller initial EcoEnterprises Fund to a full GEF equity participation in the second larger EcoE2 fund, i.e., a good example of scaling-up.

The earlier equity instruments were experienced as being challenging: The need for high returns and a secure exit further complicated sourcing of deals in “difficult” sectors like climate change and biodiversity, as evidenced by the terminal evaluations for completed equity deals. Yet there has been an uptick in the share of equity structures in more recent projects. The equity transactions in GEF-6 appear to be complex and consist of several moving parts. It is too early to gauge performance, as none of the GEF-5 or GEF-6 projects has been evaluated. That being said, equity is the highest risk position in the capital stack and could be seen to be a good fit with the GEF’s greater risk tolerance. It will be interesting to see if this complexity has an impact on project performance, or if the market has matured sufficiently to better absorb such structures.

Capital grants

In some cases, the GEF nongrant funding is provided in the form of a capital grant or subsidy to the activity in question. This mechanism has been used since the early days of the nongrant instrument. The Bolivia Rural Electrification Project (GEF ID 314), approved in 1999 and executed by UNDP, included a capital subsidy for the purchase of photovoltaic systems, as well as a credit scheme for buyers through a financial intermediary. The terminal evaluation notes that the key driver for the uptake of the photovoltaic systems was the capital subsidy, even though the credit was at a preferential rate. The socioeconomic group that would have most benefited from the credit was not attractive to the financial intermediary. More recently, the South Africa Promoting Waste-to-Energy and Other Low-carbon Technologies in SMEs project (GEF ID 5704), approved in 2016 and executed by the UN Industrial Development Organization, includes a capital grant to finance demonstration projects.

For the World Bank’s International Lighting Efficiency Facility Project (GEF ID 6980) in GEF-6, the GEF financing is expected to cover the product development costs of the facility, including legal analysis and documentation, market soundings, establishment of the facility, and related needs. Although the document repeatedly mentions recovery of product development costs by the GEF, the modalities for so doing are not spelled out and are, in any event, contingent upon the facility meeting all its other financial obligations first. Under the circumstances, perhaps this financing should have been better characterized as (reimbursable) technical assistance.

4.2 GEF-5 public-private partnership programs

Created in GEF-5, the PPP Program concerns a private sector set-aside of \$80 million, with a focus on the expanded use of nongrant instruments. Five projects are classified as PPPs in the portfolio, for a total GEF financing of \$70 million (table 4.2).

All five are presented as platforms that can cover multiple countries in the MDB’s purview. The area of focus is predominantly climate change, but biodiversity and climate-smart agriculture are also included. A variety of financial structures are used, and all involve reflows to GEF, consisting of principal and a return, ranging from concessional interest to equity returns upon sales from the equity fund.

None of the projects has been evaluated yet, but based on the design documents, the unique feature of the PPP seems to be the “platform” nature of the program and an upfront approval of funds based on broad parameters. In this respect, the PPP platforms echo the Earth Fund, with perhaps the difference that the PPP platforms do not universally include technical assistance. Debt

TABLE 4.2 GEF nongrant public-private partnership projects

GEF ID	Project title	GEF investment (million \$)	Cofinancing (million \$)
4929	African Development Bank Public-Private Partnership Program	20.0	240.0
4959	IDB-PPP MIF [Multilateral Investment Fund] Public-Private Partnership Program	15.0	266.3
5143	PPP-EBRD South Eastern Mediterranean EE/ESCO [Energy Efficiency/Energy Service Company] Markets Platform	15.0	150.0
5388	PPP-IDB Sustainable Caribbean Basin Private Equity Fund	15.0	200.0
5754	IDB-GEF Climate-Smart Agriculture Fund for Latin America and the Caribbean	5.0	50.9

SOURCE: GEF Project Management Information System.

instruments or credit lines, which are proposed in three of the GEF-5 platforms, are a well-established financing modality in GEF projects, as is risk mitigation through a guarantee structure. The GEF has also had prior experience with equity funds. Finally, GEF reflows, which are explicitly addressed in the platforms, are not a PPP innovation. They have existed under prior GEF projects, even if applied selectively and in a limited number of cases. Hence it seems the clear improvement from previous practice is the requirement that reflows and returns to the GEF be discussed; however, this requirement should apply to all GEF projects that have a nongrant feature, and is not exclusive to PPPs.

The key feature of the Earth Fund and the GEF-5 PPP Platforms seems to be that they are dedicated private sector set-asides, outside the RAF/System for Transparent Allocation of Resources (STAR) and regional or global in nature. The Earth Fund had some unique governance features (including the Earth Fund Board and clear delegated authority) that were not replicated in the GEF-5 PPPs, and hence the Earth Fund was more akin to a pilot private sector facility as seen in the GCF. The GEF-5 PPPs are also more restricted than the Earth Fund in that they were MDB-only and nongrant instrument-only.

4.3 A closer look at the GEF-6 nongrant portfolio

The GEF-6 cycle contains the most recent batch of projects approved, and a closer look at them may shed light on how the use of the nongrant instrument is evolving. In GEF-6, an amount of \$110 million was available for programming according to the policy set forth (GEF 2014d). The 10 projects amount to \$91.2 million of GEF investments (see [annex I](#)).

Of the 10 projects approved, 2 are being implemented by agencies that have not hitherto led nongrant projects: the Development Bank of South Africa and Conservation International. This indicates a greater diversification in the GEF's traditional partners. It is particularly encouraging that a national-level development finance institution accesses GEF financing. At the same time, two previously active Agencies—IFC and UNDP—are absent. This may be a function of the limited financing available for programming—the GEF Secretariat states that many more requests for funding were received than could be accommodated by available resources.

Eight of the 10 projects are multicountry efforts, representing a significant increase from previous cycles (5 of the 19 GEF-5 projects were multicountry). One reason for this evolution could be

diversification and pooling of risk. Another reason could be perceived or real GEF preferences to make financing available to a broader group of recipients. Perhaps the more likely explanation is that the nongrant set-aside is not subject to the same programming constraints and country allocations as other GEF resources, and thus follows the example set by the PPPs in GEF-5 and the Earth Fund in GEF-4.

The GEF-6 projects also show greater diversity in the sectors covered, with an increased focus on biodiversity and land degradation (three projects each). Here, too, one reason could be perceived or real GEF preferences. Another could be that there are more sources for climate change–related investment now compared to previous cycles, but the GEF remains one of the few financiers of other convention areas. Yet another reason could be that private markets in biodiversity and other sectors are reaching a stage where external financing is a viable growth option for private firms.

The GEF-6 projects make use of a wider variety of instruments, including more emphasis on equity: 4 of the 10 projects involve some sort of equity structure. As mentioned above, GEF-6 also marks the second appearance of a *pari passu* risk/return sharing feature. Equity is the riskiest form of capital in the capital stack, and it stands to reason that a mission investor like the GEF takes this position. Another reason for the greater use of equity could be the potential for returns. GEF-6 also sees the appearance of an innovative use of the nongrant instrument to provide credit enhancement for a sovereign Blue Bond. All GEF-6 projects expect to provide reflows to the GEF over the course of project implementation.

4.4 Reflows

Reflows are the financial returns transferred to the GEF Trust Fund. GEF financing is considered GEF concessional finance if it is provided to a project or program that is expected to generate reflows to the GEF Trust Fund. However, there is another aspect to reflows from GEF financing: their use in a revolving fund or similar mechanism where monies are used to provide loans or other financing, are contractually expected to be repaid, and constitute reflows to the revolving fund. These monies can then be “recycled” toward additional activities. Such project-level reflows may or may not reflow to the GEF Trust Fund. In the majority of cases reviewed in this report, project-level reflows remain in the country and continue to be used as originally intended or are deployed to other agreed uses. The significance of such recycling is that the same GEF resource delivers multiple rounds of intended benefits.

It should be noted that the majority of projects in the completed projects sample were structured with no expectation of GEF reflows, even if several included project-level reflows. The first projects to structure GEF finance in the expectation of GEF reflows were the private sector initiatives undertaken by IFC. In some cases, remaining balances in a project were rolled over into a successor project. In some projects, such as the IFC Earth Fund Platform, reflows are just beginning.

For better tracking, starting with GEF-5, project appraisal documents presented for CEO endorsement contain an annex where reflows are to be explicitly addressed. It was not possible to ascertain whether this requirement has resulted in changes in project design to incorporate or emphasize a reflow mechanism. What can be said is that there has been a clear evolution in reporting practice, with better descriptions of the reflow

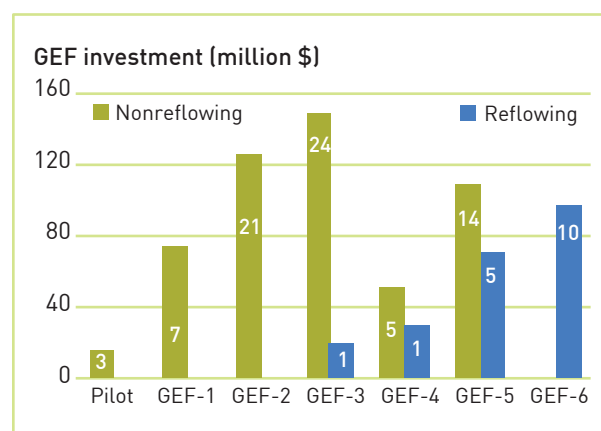
mechanism and quantification of returns to the GEF where applicable.

Table 4.3 provides a historical perspective on nongrant investments and reflows in various GEF cycles. There has been a growth in the use of nongrant instruments in later GEF cycles, as well as increased expectations of returns, as can be seen in the table. Projects in earlier cycles were structured to recover principal at best. In later cycles, there is an expectation of a positive financial return. The portfolio review of completed projects suggests that many projects set overly ambitious targets for implementation results. To what extent is overpromising dictated by the real or perceived demands of the GEF? One area in which the GEF-5 and GEF-6 projects contain rosy scenarios is for GEF reflows. It remains to be seen whether these expectations will be met. None of the GEF-5 and GEF-6 projects have yet begun generating reflows, and the long time frames involved in the sorts of activities financed means that reflows could be generated 10–20 years into the future (table 4.3).

These reflows should not be confused with the return of unused funds at the end of the project, as happens when a project component is unable to spend the resources as expected and, consequently, underspends.

For most projects reviewed, reflows remain in the country and continue to be used as originally intended or deployed to other agreed-upon uses. Seventeen projects in the 91 nongrant projects portfolio are designed to expect reflows to GEF, while the majority (73) are not. Since GEF-3, an increasing number of nongrant projects that generate reflows have been implemented. Particularly, all of the 10 nongrant projects in GEF-6 are expecting reflows to the GEF (figure 4.3). The average cofinancing ratio for the reflow projects

FIGURE 4.3 GEF investments in nonreflowing and reflowing projects, by replenishment period



SOURCE: GEF Project Management Information System.

NOTE: Labels indicate number of projects.]

TABLE 4.3 Evolution of the nongrant portfolio and reflows

GEF replenishment period	Number of projects with expected reflows	GEF funding	Cofinancing	Expected reflows	Reflow received to date
		(million \$)			
GEF-3	2	39.0	146.0	26.1	7.8
GEF-4	1	22.5	1,000.0	22.5	0.4
GEF-5	5	70.0	907.1	90.8	0
GEF-6	10	91.2	1,689.0	108.4	0

SOURCE: GEF Secretariat.

is 1:13, compared to 1:9 in the non-GEF reflow projects.

Like the overall nongrant portfolio, the nonreflowing (to the GEF) projects are evenly spread out in countries in various regions (figure 4.4). Apart from two projects in Seychelles and South Africa, the reflow projects are regionally or globally focused. Meanwhile, reflow projects display a more balanced focal area distribution compared to the nonreflowing (to the GEF) projects. Though climate change is still the most invested area (44 percent), substantial fractions of resources are devoted to multifocal (28 percent) and land degradation (11 percent) at the same time. Overall, the reflow projects appear to cover more countries and are more regionally and globally focused.

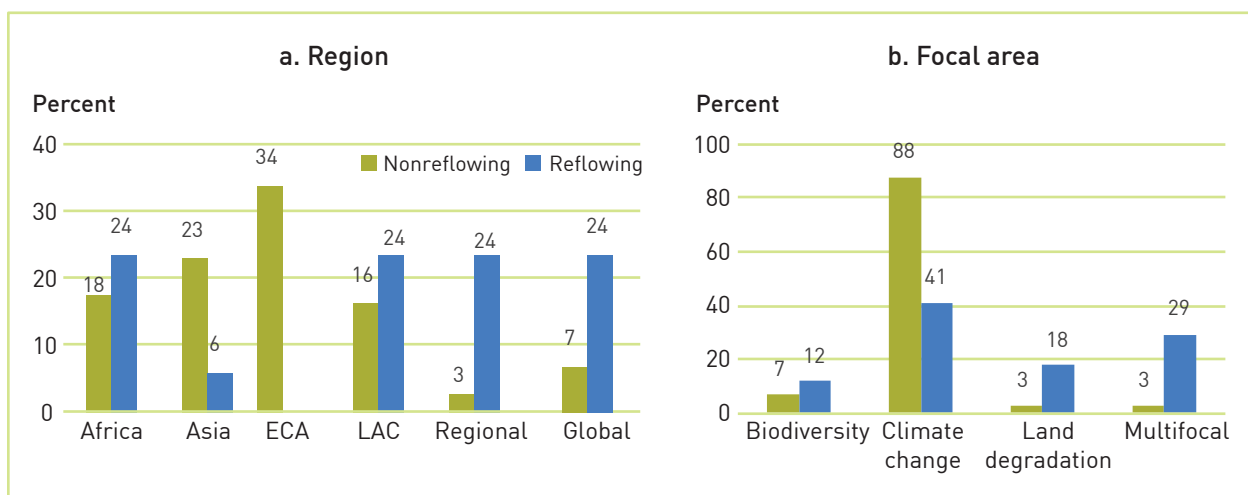
4.5 Returns continuum

This review of the GEF nongrant portfolio reveals that projects are structured across a range of expected returns, from those with strong prospects for generating financial returns alongside

environmental and other desired impacts to those that have an expectation of market-level impact but limited return. Yet neither the approval documents nor the terminal evaluations of the investments consider where on the spectrum of environmental impact and financial return a particular project may fall. A discussion of the appropriateness of the public subsidy to be applied and the correlation to development returns would be justified as part of the overall consideration to provide concessional finance or grants.

Impact investors have developed a knowledge base that can help the GEF develop a framework to assess correlations between social impact and financial return along a returns continuum. Mission-driven investors have developed frameworks for commercial capital, subcommercial capital, and grants around the theme of market building when analyzing business models and investment proposals. For example, Omidyar Network's framework defines market-level impact taking place through pioneering of new models,

FIGURE 4.4 Reflowing and nonreflowing projects distribution, by region and focal area



SOURCE: GEF Project Management Information System.

NOTE: ECA = Europe and Central Asia; LAC = Latin America and Caribbean.

providing industry infrastructure, and influencing policy, and it categorizes investments in these categories. More concessional investments are expected to make a more compelling market impact.

As a mission-driven investor with a mandate to support market building and environmental impact using nongrant instruments, the GEF assumes risks with an expectation of

risk-adjusted returns. By assessing the investments along a continuum of return and the expected market impact using different categories and measures, as opposed to a wholesale approach, the GEF could be more clear in the expectations of environmental impact, particularly when trying to influence market transformations.

5: The GEF's role in engagement with the private sector

As described in [chapter 2](#), the global environmental financial landscape has changed significantly since the establishment of the GEF and is now full of different actors and financial instruments supporting environmental projects at various stages. At the same time, the GEF's toolbox is ample and flexible, as exemplified by the GEF's five main intervention models for private sector engagement. This implies that there is an even greater opportunity for the GEF to support environmental projects involving the private sector, directly or indirectly, while providing clear added value.

In the survey of GEF private sector stakeholders, the majority think that the current environmental finance landscape lacks a clear, coherent overarching approach and is difficult to oversee. A recent World Resources Institute report (Amarasinghe et al. 2017) that examined several climate funds (including the GEF) also stated that the proliferation has resulted in some overlapping of roles and duplication of efforts, hampering efficiency and coordination.

This chapter discusses the GEF's potential in the context of other multilateral funds that come closest to the GEF in terms of mandate, philosophy, and operating modalities, as well as in the context of the roles it can and does play.

Building on the comparative analysis of the GEF with other facilities, as part of the survey of private sector stakeholders who have personal

experience in working with the GEF, questions were asked to gauge awareness of and attitudes toward the GEF's engagement of the private sector. Private sector respondents familiar with the GEF report that the GEF is not perceived as a very accessible organization. Nevertheless, once an individual establishes a personal relationship with a GEF representative (staff or Implementing Agency), satisfaction rates go up and respondents mention that their counterpart is very willing to work together.

5.1 Perceived strengths

Private sector stakeholders consider the GEF a (potentially) valuable partner mainly based on the following five capabilities and strengths.

- **Flexible financing instruments.** The GEF has several financing grant and nongrant finance instruments available. The variety of instruments is large, and the possibility of combining different instruments in one project makes it all the more appealing to private sector partners—in particular, for the more complex projects that need both financing and capacity building.
- **Risk appetite.** With its not-for-profit mandate, the GEF has room to take more risk with its financing than for-profit financial players. This makes the GEF an excellent partner to support innovative early stage ventures that

have difficulty accessing mainstream capital. Whether through lending, equity investments, or risk-sharing mechanisms, the GEF helps create the right conditions for other (private sector) capital to step in.

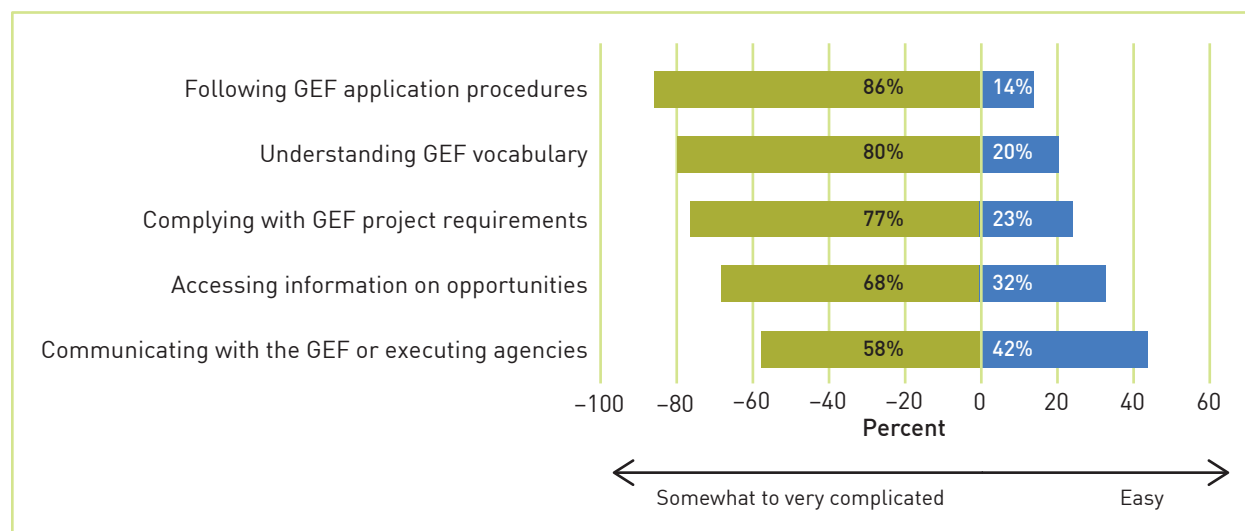
- **Reputation.** Given its long track record in the environmental finance field, the GEF has a well-respected reputation. Having a partner on board with that kind of reputation is important to private sector companies and projects, as it gives them a “stamp of approval,” a powerful tool for projects with strong potential but a lacking track record.
- **Knowledge.** The GEF is praised for the technical expertise that its people have on environmental projects. The private sector appreciates the knowledge that the GEF can bring to a project and how this improves execution quality.
- **Network.** As the center of a partnership among 183 countries, 18 implementing Agencies, civil society organizations, and the private sector, the GEF’s network function is of strong added value to private sector actors. The GEF has the ability to make connections with donors or development banks, assist in addressing regulatory issues, or gain political backing.

It should be noted that the vast majority of stakeholders indicated that these strong points generally are underleveraged in private sector engagement and practical cooperation. If the GEF wants to strengthen private sector engagement, it will have to further institutionalize these capabilities and strengths and better communicate on cases where these strengths resulted in added value to a private sector partner.

5.2 Perceived weaknesses

The stakeholders also identified four main weaknesses in the GEF’s engagement and operations.

- **Cumbersome approval procedures.** Nearly all respondents mention that the approval process of the GEF is too slow and complex for the private sector. This causes uncertainty and deters potential private sector partners from working with the GEF, thereby affecting the quantity and quality of proposals submitted to the GEF. There is consensus among respondents that the cumbersome approval process is the most pressing issue hampering effective private sector engagement by the GEF (figure 5.1).
- **Difficult to obtain information.** Respondents find it hard to obtain information on the GEF’s private sector engagement and the opportunities for cooperation. Communication material is too technical, and although national focal points are the first point of contact for the private sector, they seem to have limited awareness of the opportunities offered by the GEF’s private sector engagement. Most partners actually know about the GEF and opportunities for working together through personal interaction with the GEF Secretariat rather than public information.
- **Ambiguous project requirements.** The GEF’s eligibility criteria for support are perceived as too general, providing insufficient guidance on what the GEF actually expects from projects. The key qualifier for projects under the nongrant agreement is to contribute to “global environmental benefits as per GEF-6’s Focal Area Programming Directions” (GEF 2014d, 5). The private sector expects more clarity on exact requirements, which enables them to submit better project proposals. At the same time, some partners reported that the GEF formulated new or additional project criteria

FIGURE 5.1 Complexities in working with the GEF

SOURCE: IEO analysis

during the appraisal process, which created a nontransparent and unpredictable situation.¹

- **Lacking private sector mindset.** Although private sector partners describe GEF Secretariat staff as very knowledgeable, it is also felt that their focus on technical issues does not match private sector reality. Respondents mentioned situations in which GEF Secretariat staff requested very detailed information about a project that was disproportionate to the project's maturity or size. Some respondents cited a lack of knowledge about financial

mechanisms, terminology, and practices as additional factors that appeared to have slowed down project appraisal processes.

These overall observations indicate that the GEF does not have a natural and preexisting channel for private sector engagement, particularly to larger corporate entities engaging primarily in nongovernment transactions.

5.3 Three main roles of the GEF

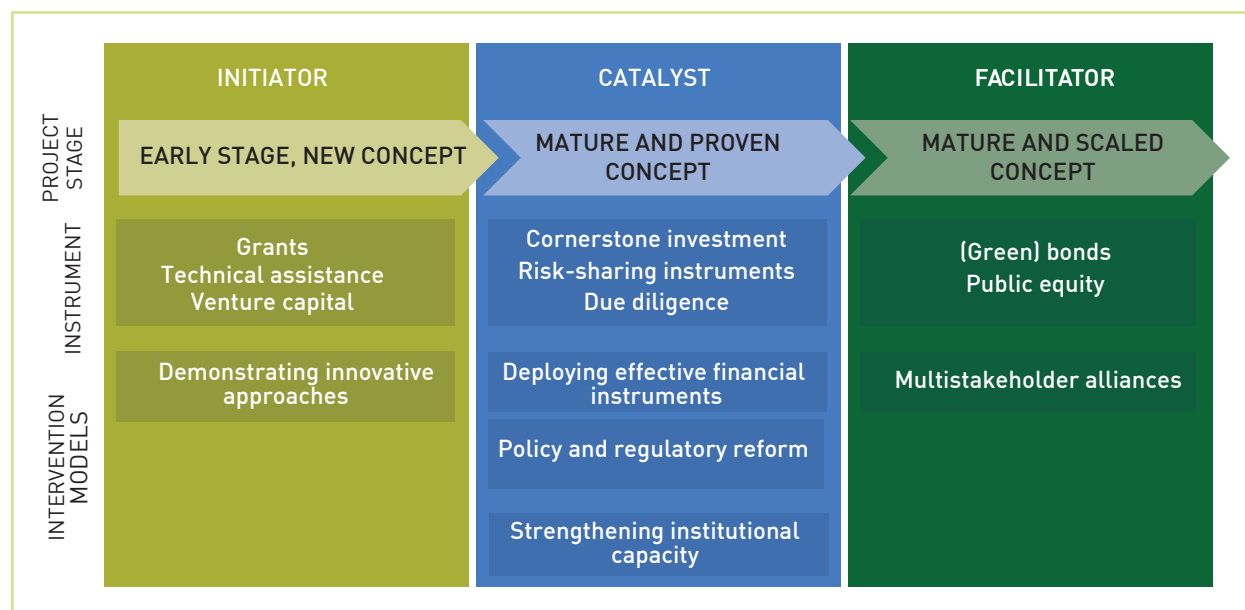
Considering the GEF's intervention models, the GEF's private sector engagement can be thought of as structured around three main roles: those of initiator, catalyst, and facilitator (figure 5.2).

INITIATOR

The first role is that of the initiator. The core focus in this role is to help initiate new, innovative concepts and/or early stage environmental projects, companies, or funds that have potential for upscaling or replication. This role is particularly critical as MDBs expand their commitment to climate and environmental finance, but at times

¹ Interviews with the GEF Secretariat reveal that private sector entities often do not understand initially that projects must be implemented or supervised by GEF Agencies. In the case of the Earth Fund, there were numerous dialogues with the proposing entities, including "matchmaking" discussions with relevant GEF Agencies, to develop proposals that met all the relevant criteria and allocated the benefits and burdens among the parties. The Earth Fund also published a set of criteria and procedures that could be sent to interested private sector entities and made the process easier to understand. The IFC Earth Fund Platform was managed separately by IFC.

FIGURE 5.2 Key roles of the GEF in the environmental finance landscape



lack viable projects with the backing of private investors in their deal pipelines. Many key project-side barriers in conservation finance markets have been identified that the GEF as an initiator can help address: high search costs, lack of track record of developers and projects, lack of bankable collateral, scalability difficulties, and insufficient monitoring (Credit Suisse Group AG and McKinsey Center for Business and Environment 2016).

Instruments

The projects or companies looking for support often are still too small, untested, and therefore risky for private sector investors. They could benefit from the GEF's ability to provide different forms of financial and nonfinancial support, the GEF's "stamp of approval," and the GEF's network. The main suggested forms of financial support to the private sector in this role for the GEF follow:

- **Grants**—funding the costs and activities that could help develop a company or project in its

initial stages where other forms of financing are not yet available

- **Technical assistance**—funding for feasibility studies or the assistance of third-party experts or consultants in the development of a company or project
- **Venture capital**—investing in the early stages of a project or company, preferably as the anchor investor; where possible, investment should be preferred over grants, as it provides a more credible demonstration of viability to the market

Requirements for this role

This role is closest to the GEF's traditional focus, as the GEF has a long history of providing support for the demonstration of a technology or a new approach to address environmental degradation, with the aim of creating a "beacon effect" that can spur broader adoption. The GEF's early support for concentrating solar power production and its support for payment for ecosystem services are two examples of the GEF's support for innovation.

In order to attract more potential projects that meet the GEF's requirements, the GEF needs to better define and communicate its eligibility criteria and approval process (including the role of GEF Agencies) for each of the different instruments. It could consider developing a portal on the GEF's website, which clearly outlines the criteria, process, and templates to use.²

The GEF might also be able to prioritize geographic areas and market niches for investment and partnership with the private sector where other climate change funds and MDBs have struggled. For example, the CIF's SREP was able to receive only a small number of viable private sector projects to satisfy its programming requirements in its private sector carve-out.³ The SREP plans to expand its pipeline by loosening programming and geographic constraints, and enhancing collaboration with other renewable energy development programs and institutions. GEF efforts could create complementarities to help fill these gaps, including laying the groundwork through enabling environment improvements, stakeholder outreach, and technical assistance to foster project development.

Key factors in project appraisal

If the GEF wants to have the most impact through its support, it should try to focus on technologies or projects with disruptive potential. Specifically,

the following three criteria should be on top of its list during company or project appraisal:

- **Innovativeness**—the extent to which a project or instrument pilots innovative approaches in a country, sector, and/or technology context
- **Scalability**—the extent to which projects can be replicated (e.g., in multiple countries) or financed repeatedly at lower transaction costs
- **Commercial viability**—the sustainability of the operational impact of the supported projects, both during and after the GEF's involvement and/or financial support, thereby ensuring the commercial viability of the project

CATALYST

The second role is that of the catalyst. The core focus in this role is to help attract additional private financing for environmental projects, companies, or funds. This helps cover investment gaps and/or risks that investors, who generally focus on financial returns or private development benefits, would not have the incentive to cover. A recent World Resources Institute study of climate change finance institutions noted that the GEF has an opportunity through “focusing ‘pure play’ climate change support on catalytic mitigation interventions. In doing so, the GEF can complement the GCF and CTF in supporting programmatic approaches and systemic shifts for mitigation.” (Amerasinghe et al. 2017) In this manner, the GEF role as a catalyst can create synergies with its role as an initiator: The GEF can build upon its early relationships with nascent and emergent pilot and demonstration projects through follow-on risk-sharing, cornerstone, and due diligence investments that draw in other financiers, yielding a pipeline of investment-ready projects at scale.

²An example of a public, mission-driven fund that has such a portal for funding applicants is the Global Health Fund. This portal was specifically mentioned by a key industry network specialist as a best practice in the field.

³“... it was recognized that the PSSA model placed many programming constraints on MDBs, which considerably reduced the program's effectiveness for private sector engagement” (CIF 2016, 3). As a result, not many high-quality proposals were submitted for consideration.

Instruments

The GEF can leverage private sector financing by signaling confidence to the market through its own (co-)investment or by de-risking investments through financial or nonfinancial instruments. The three main forms of support to catalyze additional investment follow:

- **Risk-sharing instruments.** Through risk-sharing instruments, the GEF can mitigate potential high-risk perceptions and/or a lack of confidence in the financial viability of environmental projects or innovative investment funds. This will catalyze additional financing by private investors in these projects or funds.
- **Cornerstone investment.** Particularly for innovative environmental investment funds, it is crucial to get the first investor on board. By stepping in first, the GEF can signal confidence to the market and act as an active reference to other potential investors.
- **Due diligence.** The GEF could also mitigate risk by carrying out or financing due diligence for innovative projects or funds. As long-term investors often lack the technical knowledge or resources to carry out the intensive and technical due diligence required, the GEF can pave the way for investors to step in.

Requirements for this role

The GEF also already has some experience in this role, particularly with risk-sharing instruments. A concrete example is its support for the project on China Utility Energy Efficiency, where the GEF provided funds to lower the risk of large-volume IFC loan guarantees to help unlock energy efficiency lending from commercial banks. However, this experience is still limited, and the GEF should consider increasing its support through these instruments.

The GEF has less experience with cornerstone investments and (financing) due diligence projects. In order to support funds as a cornerstone investor, the GEF will need to specifically accept a higher level of risk appetite. It would need to communicate on this to (potential) fund managers through its website and network conferences. It will also need to change its procedures to allow for quicker decision making. If the GEF also wants to mitigate risk for investors through execution of due diligence, it will need to streamline its project appraisal processes more along the lines of private sector due diligence processes. In the short term, the GEF could consider setting up a financing facility for due diligence projects.⁴

Key factors in project appraisal

For most impact in this role, the GEF should particularly focus on the following two factors:

- **Leverage.** The key factor is the GEF's potential leverage effect, or the extent to which the GEF's support has the potential for crowding in additional private sector financing or other resources. Unfortunately, there is no standardized model to calculate this, and it will have to be considered on a case-by-case basis.
- **Replicability.** The project, company, or fund supported through the GEF's de-risking instruments should ideally have a demonstration effect. This means that it should be able to be replicated in different geographies.

⁴ An example of such a facility is the Netherlands government's Develop2Build (D2B) program, which provides funding for preliminary studies—such as feasibility studies, environmental impact assessments, and conceptual designs—needed for infrastructural project tenders. For more information, see the [D2B webpage](#).

FACILITATOR

The third role is that of the facilitator. The focus in this role is more indirect, but not less important. It is aimed at bringing parties together and creating an enabling environment for larger-scale financial intermediaries and capital providers to operate effectively. In this space, the GEF can provide support on policies and regulation, bring together stakeholders from different backgrounds, and strengthen institutional capacity. The GEF's credibility, long track record, and network are its key capabilities that can be of added value to the market.

Instruments

The main suggested forms of support to the private sector in this role for the GEF follow:

- **Multistakeholder alliances.** The GEF could initiate and strengthen initiatives that facilitate investment by capital providers and financial in environmental projects, companies, and funds.
- **Policy and regulatory support.** The GEF could help governments and financial regulatory bodies put in place policies, regulations, or particular incentives that allow financial instruments aimed at environmental benefits (e.g., green bonds) to thrive.
- **Strengthening institutional capacity.** The GEF could raise awareness and build capacity among ministries of member states on innovative private sector solutions to environmental problems.

Requirements for this role

The domain of capital markets and institutional investors is largely uncharted territory for the GEF, but at the same time it is a place where the GEF can bring unique features to the table. Compared to the initiator and catalyst roles, the GEF's

potential support instruments in the facilitator role are less clear-cut. The GEF should carefully assess where its reputation as a credible institution, its technical expertise, and its network among governments can add most value, and where private sector actors are open to including the GEF as a full-fledged partner. This will require an additional round of talks with private sector actors active in this segment of the market, from major banks and investors to initiatives (e.g., the Climate Bonds Initiative) and service providers (e.g., environmental, social, and governance rating agencies).

In parallel, the GEF could perform internal deliberations on where it sees a role for itself. It could further research the setup of new partnerships that aim to tackle hurdles such as the lack of standardized frameworks, or new business models that link natural resources to revenue streams. It could also research where it can bring its knowledge, credibility, and network to the table of existing initiatives, such as the Green Bond Principles. A start could be an awareness-raising campaign of best practices by private sector actors and best practices of member states facilitating private sector solutions.

Key factors in project appraisal

The GEF should carefully assess where it can add value in this segment of the market. This could particularly be relevant in cases of a lack of knowledge, level playing field, credibility, or standardization.

STAKEHOLDER VIEWS

In the survey, both private sector stakeholders and GEF internal stakeholders were asked about current GEF intervention models and instruments.

Private sector views

When asked about the most impactful intervention models, GEF private sector stakeholders have a preference for the deployment of innovative financial instruments. As figure 5.3 shows, both companies and financial intermediaries perceive innovative financial instruments to be the most impactful engagement. This preference for the deployment of innovative financial instruments appears to indicate that private sector stakeholders prioritize the GEF's role as a catalyst.

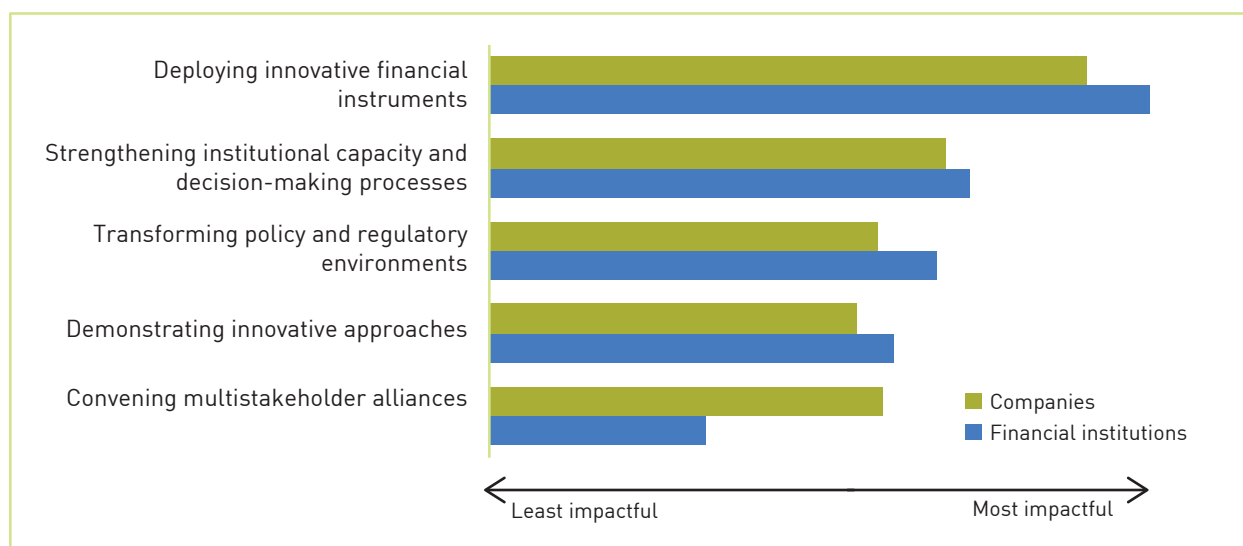
On the other GEF roles views are more balanced, with comparable views on the potential impact of GEF support. Financial intermediaries do not yet seem to realize the potential for the GEF to contribute to multistakeholder initiatives, which can be explained by the GEF's lack of track record in supporting initiatives in the financial sector.

The importance of the GEF's potential role as a catalyst is further confirmed by the private sector stakeholders' interest in specific instruments:

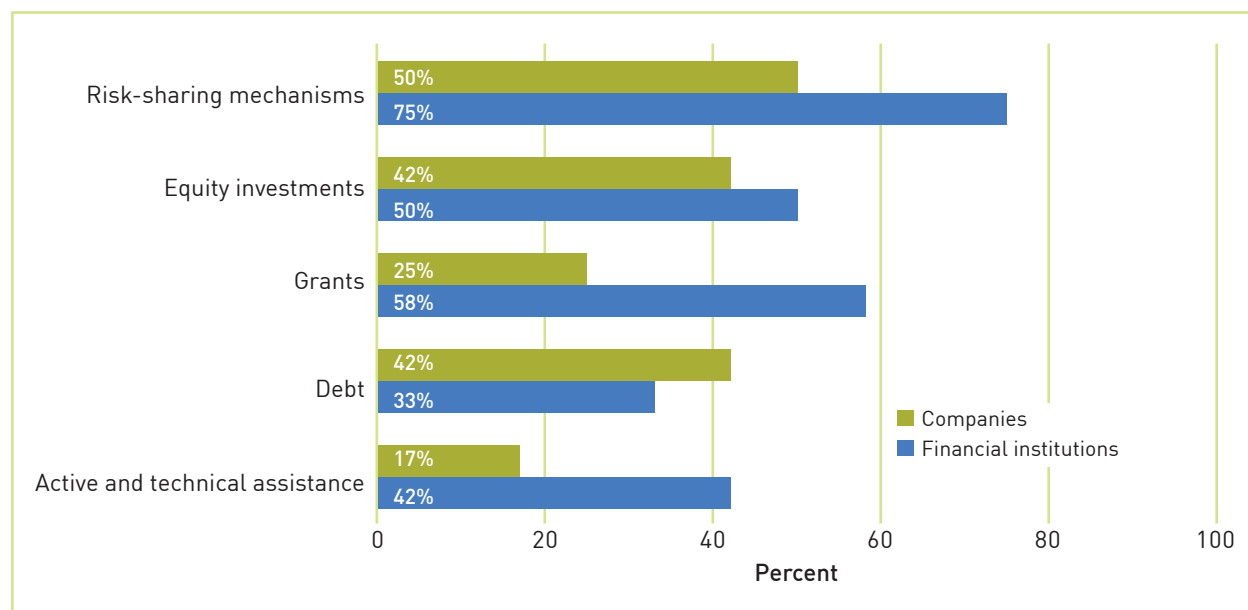
Figure 5.4 shows that both companies and financial intermediaries are most interested in risk-sharing mechanisms. Particularly, the interest in risk-sharing mechanisms among financial intermediaries is striking, and they concretely suggest that the GEF help design instruments for blended finance that will better enable institutional investors to invest in the environmental programs in developing countries that meet their risk/return requirements.

In addition to risk-sharing mechanisms, companies are mostly interested in finance for projects in the form of debt and equity (figure 5.4). Only a small portion of companies are interested in grants, advice, and technical assistance. Financial intermediaries, on the other hand, do have an interest in these forms of support. Financial intermediaries see grants as instruments that could further leverage their financing, while technical assistance can remove bottlenecks for financing, such as funding for technical due diligence.

FIGURE 5.3 Most impactful intervention models



SOURCE: GEF Project Management Information System.

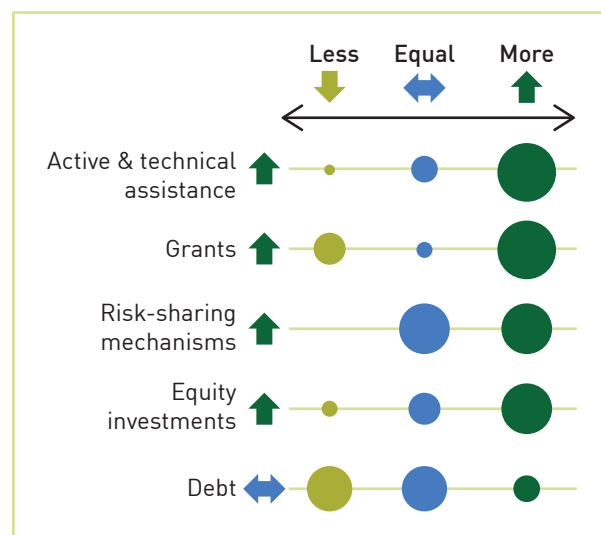
FIGURE 5.4 Interest in types of GEF support and financial instruments

SOURCE: IEO analysis

GEF internal views

GEF internal stakeholders (Secretariat staff, implementing agencies, and focal points) think the GEF should increase its support to the private sector through various instruments. Figure 5.5 summarizes their combined views on five different instruments, with bubble size indicating the number of respondents.

The majority of internal stakeholders surveyed think the GEF should offer more technical assistance, grants, risk-sharing mechanisms, and equity investments. Only in the case of debt financing are opinions mixed. Most internal stakeholders see merit in increasing technical assistance and grants, the most familiar instruments in the GEF's toolbox. At the same time, none of the stakeholders surveyed seem to oppose risk-sharing mechanisms. These findings seem to indicate solid support within the GEF for intensified GEF private sector engagement.

FIGURE 5.5 GEF view on type of support to be given to the private sector

SOURCE: IEO analysis

6: Conclusions and recommendations

In setting the stage for the planning for the GEF-7 replenishment, a key line of inquiry of this study is identifying the GEF's comparative advantage in the realm of private sector engagement in general, and environmental finance in particular. This question holds both with regard to the GEF's delivery on its commitment to engaging and partnering with the private sector consistent with guidance from the multilateral environmental agreements and throughout its operations and programs.

When the GEF first started, it began its private sector engagement by focusing on buying down risk, often on a project-by-project basis. This approach has yielded success: The GEF has helped to create lines of business in banks where previously lending was absent. But internal studies since at least 2011 have revealed that the GEF needs dedicated, sophisticated, and enduring strategic efforts to develop private sector engagement strategies that overcome the GEF's weaknesses in this area to achieve transformative impacts.

Moreover, the private sector and environmental finance landscapes have changed considerably. Notably, the amount of climate finance and environmental finance is much greater today than even a few years ago. Mainstream financial institutions in many middle-income countries are providing loans for projects such as wind power and energy efficiency; furthermore, many

development banks and development assistance institutions are active in this space, making the issue of identifying the GEF's comparative advantage a pressing one.

At the same time, the GEF now has a greatly expanded set of experiences working with the private sector than it did even a few years ago, thanks to its expanded experimentation with nongrant instruments, PPPs, mainstreaming, and IAPs.

Meanwhile, the private sector's attention to the GEF's core issues of environmental sustainability has expanded dramatically in recent years, as has nongovernment investment in the conservation, environmental, and climate change finance domains.

The key question: Where and how does it make sense for the GEF to be involved within the private sector? The GEF is active across many types of pilots and programs, engagement approaches, geographic and thematic areas, project scales, levels of concessionality in investments, and degrees of innovation.

To get at this question, the GEF has conducted an internal portfolio review, including of its nongrant instruments; surveyed external stakeholders on its private sector engagement; and completed a comparative analysis of the two largest public climate finance institutions (aside from the GEF),

the GCF and the CIF, to glean lessons learned and better refine the GEF's niche in this arena.

6.1 Conclusions

Conclusion 1: The GEF engages with a wide variety of for-profit entities that vary in their industry focus, size, and approach to environmental issues using a mix of intervention models. The range extends in size from multinational corporations; through large domestic firms and financial institutions; to micro, small, and medium enterprises and smallholders/individuals. Because GEF projects are designed to address complex issues, an assortment of intervention models are needed to address the assortment of barriers to environmental protection. Among the intervention models, the most commonly applied ones are those that facilitate institutional strengthening and those that transform policy and regulatory environments. These are areas of comparative advantage for the GEF. Lack of regulatory frameworks and environmental policies can impede in-country compliance with standards and affect the achievement of global environmental benefits, while creation of supportive conditions is a factor in successful private sector participation.

The GEF's private sector activities overall can thus be broadly considered as "upstream" in the development continuum—to create and nurture the necessary ecosystem for private sector engagement. However, this is potentially at odds with a push for greater financial self-sufficiency, which emphasizes reflows and financial structures that provide a financial return to the GEF. Indeed, the GEF appears to be drifting more "downstream," even structuring its nongrant instrument on an equal footing with other investors in some recent cases.

Conclusion 2: The GEF is constrained in its engagement with the private sector because

of operational restrictions. The GEF's ability to engage the private sector diminished during GEF-4 as a result of the then-introduced RAF. For many operational focal points and countries, this was a shift to empowering them to program GEF support to the country. Consequently, private sector set-asides have been a primary modality through which engagement has continued, first with the Earth Fund platform and then with the PPP platform in GEF-5 and the nongrant pilot in GEF-6. The fragmented nature of these interventions, combined with the limits of the STAR, often means that private sector innovation is not easily reconciled with country ownership and national strategies and priorities.

Conclusion 3: It is difficult to systematically gather evidence on elements of the GEF's private sector activities without improvements to the GEF PMIS. GEF projects that have an element of private sector engagement are not easily retrieved from the organizational database. This lack of systematic "tagging" of those projects was raised by the IEO in the Fifth Overall Performance Study on private sector engagement. The inability to generate accurate project data persists. Moreover, the quality of the information about private sector engagement contained in terminal evaluations is extremely variable. A significant shortcoming was the scant attention paid in most nongrant project terminal evaluations to the financial information about the project.

Conclusion 4: GEF investments involving private sector engagement have higher cofinancing. In particular, the private sector portfolio is catalyzing private investment. Every dollar from a GEF grant leverages \$8 in cofinancing, compared to \$6 in cofinancing estimated for the overall GEF portfolio. Three dollars out of eight in cofinancing comes from private sector investments, mostly in the form of equity investment. The leverage ratio has been steadily increasing since the first GEF

period (with the exception of GEF-4). In GEF-5, for every dollar spent by the GEF, \$11 in cofinancing was received for private sector projects by other parties (including the private sector).

By stimulating markets and reducing risk, non-grant projects have resulted in high cofinancing leverage ratios. On average, every dollar of a GEF grant spent for nongrant projects leverages \$10 in cofinancing. Not only is the overall leverage ratio highest among the private sector portfolio, it is also highest among the general GEF portfolio. Notably, this ratio has improved greatly in GEF-5 and GEF-6. For every \$10 leveraged by a GEF nongrant project, \$5 comes from private sector investments.

Conclusion 5: Climate change projects feature heavily in the private sector portfolio. Two-thirds of the projects in the portfolio are in the climate change focal area, amounting to 62 percent of the GEF's total investment in private sector projects. Furthermore, the majority of the nongrant projects concern climate change. This reflects the significant global effort that has gone into creating conducive policy and regulatory environments that would facilitate private activity in the climate change arena. In GEF-6, chemicals and waste, a differentiated focal area, was added. Sixteen chemicals and waste projects, representing 17 percent of private sector portfolio projects and 15 percent in terms of investment in this period, are being implemented. While all focal areas have consistently identified the private sector in their focal area strategies, it was considerably easier to locate examples of engagement from the climate change and biodiversity focal areas than it was to find project examples for international waters or land degradation (excluding projects concerning smallholders). These signals of low involvement within a portfolio known to have engaged the private sector indicate a need for more comprehensive collection of information

and documentation on engagement with the private sector.

Conclusion 6: There are several players in the climate finance space but few in the other convention areas covered by the GEF. In comparison to climate change, the other convention areas have limited private sector activity in present-day challenge areas, such as water scarcity and food security affecting vulnerable populations. Though the low levels of activity impede the GEF's ability to structure nongrant projects in these areas with significant reflows and returns, the earlier stage of development is an opportunity to focus and develop the upstream environments needed to enable private sector participation and thereby grow new environmental markets. The GEF has the flexibility and thematic breadth to employ cross-cutting approaches and to work in a wide range of environmental finance and conservation domains. Among nongrant projects in GEF-5 and GEF-6, there is a relative increase in non-climate change projects. Particularly, the GEF-6 projects show greater diversity in the sectors covered, with an increased focus on biodiversity and land degradation.

Conclusion 7: The range of nongrant instruments employed by the GEF is needed to target specific environmental market failures. Many of the barriers to private sector investment have not fundamentally changed in the 20-plus years covered by the sample projects. Justification for the GEF nongrant financing still includes limited availability of capital; limited appetite on the part of commercial banks; and lack of familiarity with the sectors, financing modalities, and instruments.

Technical assistance plays a significant role in most nongrant projects and is often integrated into the financing structure or mechanism. The GEF has a long history of and experience with

providing technical assistance and capacity building. These are necessary adjuncts to investment support and a clear niche for the GEF when acting in conjunction with other financiers. The GEF also appears to have a greater risk appetite and tolerance than other financiers, as evidenced by its willingness to take first loss positions and assume the highest risk in a financing plan. This can play a vital role in unlocking other sources of finance and, together with technical assistance, has catalyzed systemic shifts in climate change mitigation. Alongside technical assistance and capacity building, the nongrant instrument can lend itself to a variety of structuring to address some subset or combination of these barriers.

Conclusion 8: There has been an evolution in the use of the nongrant instrument toward more systematic reflows and a more explicit requirement for returns. Nongrant projects in earlier cycles were structured to recover principal at best. In later cycles, there was an expectation of a positive financial return. To date, \$8.2 million in reflows has been received. GEF-5 and GEF-6 projects have not yet begun generating reflows, and the long time frames involved in the sorts of activities financed means that reflows would be generated 10–20 years into the future. It Projected reflows in GEF-5 and GEF-6 seem optimistic, particularly in light of GEF experience, which suggests that many nongrant projects set overly ambitious targets for implementation results. It should also be noted that there are trade-offs with returns and reflows based on the development phase of the activity being financed. If used in the context of more upstream activities, then instruments will need to focus more on concessionality, which will sacrifice returns and reflows. For more downstream activities, such as in early stage and new concept projects, the GEF could expand the use of the nongrant instrument, with potential for greater returns and reflows.

Conclusion 9: GEF country clients and private sector stakeholders each lack awareness of the opportunities for engagement with one another. As reported through the online survey, the GEF's position, processes, and role are insufficiently clear to the private sector. Similarly, GEF recipients have varying degrees of knowledge of the role of private sector in green finance and accessing funds beyond the usual GEF grant instruments. Private sector respondents find it hard to obtain information on the GEF's private sector engagement and the role of Agencies and opportunities for cooperation. Additionally, nearly all stakeholder respondents mentioned that the approval process of the GEF is too slow and complex. This causes uncertainty and deters potential private sector partners from working with the GEF. Private sector respondents expect more clarity to help them better prepare for cooperation with the GEF.

6.2 Recommendations

Recommendation 1: The GEF can address operational restrictions to private sector engagement through pursuit of a private sector window.

Procedures that allow for private sector engagement outside of the STAR and that are granted on the basis of broad approvals best serve the rapid timelines of private sector decision making, leaving specific tailoring to GEF Agencies in partnership with sponsors and initiators.

A suitably structured private sector window would support market-based interventions through innovative PPPs; strategic partnerships (including public-private-philanthropic partnerships to catalyze business model development); and multi-stakeholder coalitions that can include national and subnational governments, companies, SMEs, producer organizations and cooperatives, commercial and impact investors, private foundations, environmental nongovernmental agencies, other

donor agencies, research institutions, academia, and other actors to align economic development with protection of the environment. A private sector facility would stimulate the deployment of blended finance as inclusively defined by the Organisation for Economic Co-operation and Development and the World Economic Forum: “the strategic use of development finance and philanthropic funds to mobilize private capital flows” (OECD and World Economic Forum 2013, 4), without prejudice to other models of blended finance used by some GEF Agencies which would also be encouraged.

These investments should be guided by a framework that considers financial and environmental returns and degrees of concessionality on a spectrum appropriate to for-profit companies to help ascertain what financing conditions should be met and what risks should be considered.

In addition, synergy between a dedicated private sector window and other GEF operations engaging the private sector (including the GEF-6 IAPs) could be enhanced by constituting a Private Sector Advisory Group that would advise the Council on GEF-wide engagement with the private sector, including a specific focus on enhancing engagement with the private sector beyond climate change mitigation.

Recommendation 2: The GEF should encourage policy and regulatory reform for its cascade effect on private sector environmental investments. Lack of standardized regulatory frameworks and environmental policies can impede in-country compliance with standards and affect the achievement of global environmental benefits, while creation of supportive conditions is a factor in successful private sector participation. The GEF’s ability to support legal and regulatory reforms and incentives along with institutional capacity building strengthens country ownership,

is a comparative advantage, and is required to provide long-term certainty to reduce investment risks and create the enabling environment for projects to go to scale. Strategic investments in policy initiatives, particularly to enable investment in newer fields such as conservation finance, can address the lack of adequate regulatory frameworks and have the potential to change behavior in markets and economies beyond the confines of a specific activity. Government regulation combined with enforcement can act as collateral and reduce risk or transform the environmental benefits of investments from externalities into monetary returns.

Recommendation 3: Intensify efforts to develop a broader strategy for private sector engagement beyond climate change. The GEF is uniquely positioned to develop a pipeline of investment-ready projects in areas of environmental protection that attract private resources beyond the climate change focal area and include partnering with larger entities as well as SMEs in developing countries. As conservation and ecosystem services finance continues to grow with active private sector participation, the GEF can leverage its appetite for small, diverse, and innovative projects to expressly promote both supply and demand for new geographic and sectoral environmental finance markets such as water, waste, forests, biodiversity, and ecosystem services.

Recommendation 4: Improve outreach to GEF recipients of funds, GEF Agencies, and private sector entities. Easier access to information will lead to increased awareness among countries, Agencies, and private sector stakeholders of opportunities for cooperation with one another and the GEF. This could include more private sector-specific content on the GEF’s website, the development of “how-to” guides for countries wanting to work with the private sector, and organization of “investor roadshows” for the private

sector to promote cooperation opportunities. Ideally, these efforts should be coordinated with GEF Agencies and embedded in multistakeholder coalitions to entice targeted private sector stakeholders to engage. Additionally, the GEF could identify members of a Private Sector Advisory Group at the vanguard of conservation finance, environmental protection, etc., who may be positioned to serve as intermediaries and strategic advisors to the GEF in reaching out to the broader community of investors and companies in areas where the GEF's expertise and brand are weak. The GEF could also consider an approval process that allows private sector partners to track the status of a proposal with more transparency.

Recommendation 5: Dedicate appropriate resources to tracking, monitoring, and evaluation of the private sector portfolio by improving tagging and retrieval capabilities of the PMIS database. Accurate monitoring of the portfolio of projects that engage the private sector

is currently not possible. Projects should be tagged to allow for systematic retrieval. As part of the tagging, further definition within the GEF of what is considered private sector engagement should ensue. The PMIS does not adequately provide information on type of nongrant instruments used, investment allocation, or projected reflows. Moreover, classification of instruments in the project documents can lead to confusion and create inconsistencies. Some projects utilize more than one instrument and do not spell out the allocation between the instruments, making it difficult to appropriately classify them. There is still a long way to go to standardize formats and information requirements. The extent and type of private sector engagement could also be a standard evaluation question included in midterm and terminal evaluations.

Annex A: Terminal evaluation review instrument

(Minor edits have been made for consistency.)

No.	Question	Response choices
1	Is there at least minimal evidence for private sector engagement in this project?	Yes, No
2	Provide the names of up to six private sector firms or companies appearing as participants in this project. If there are more than six, select those that are most involved in the project. For entities not names, enter "Unspecified private sector firm, enterprise, bank," etc.	Open-ended response
3	Classify the same six private sector entities, based on evidence in the terminal evaluation, by project role and type of entity.	Role: Executing agency, Cofinancier, Beneficiary, Implementing partner, Other, Unable to assess (UA) Type: Multinational corporation, National corporation, SME, Individual/entrepreneur, Capital provider, Financial intermediary, Market facilitator, Unable to assess (UA)
4	What was the total cofinancing amount from private sector entities?	None, 0–10k, 11–50k, 51–100k, 101–500k, 501–1m, over 1m, Unable to assess (UA)
5	Which of the five intervention models best describes this project's approach to private sector engagement?	1. Enabling policy environments 2. Strengthening institutional capacity 3. Specialized financial instruments 4. Demonstrating innovative approaches 5. Multistakeholder alliances
6	What strategies did the project use to engage the private sector?	1. Unable to assess (UA) 2. Subsidy/grant to private companies 3. Public-private partnerships 4. Public-private alliances 5. Cooperatives/joint ownership enterprises 6. Indirect engagement 7. Direct engagement 8. No strategy 9. Other (please specify)
7	Was a private sector firm or entity consulted or formally included in the project design process?	Yes, No, Unable to assess (UA)
8	What types of government entities participated in this project?	1. Local or state government office/agency 2. National government agency or national ministry 3. Regional (multinational) coordinating commission 4. Other (please specify)

No.	Question	Response choices
9	What was the role of government entities in this project?	1. Unable to assess (UA) 2. Executing agency (either sole or in collaboration) 3. Cofinancier 4. Implementing partner 5. Beneficiary 6. No government involvement
10	Do the key lessons learned address any of the following issues?	1. Capacity to execute the project 2. Stakeholder engagement 3. Country ownership or alignment to national and regional priorities 4. Funding and financial planning 5. Capacity building 6. Effects on local population 7. Baseline information 8. Legal and institutional framework
11	Do any key lessons learned have implications for private sector engagement?	Open-ended response
12	Summarize additional information about the role of the private sector in this project.	Open-ended response
13	Which project evaluation documents were consulted in answering this questionnaire?	1. Terminal evaluation report 2. GEF IEO terminal evaluation report 3. Other (please specify)

Annex B: Private sector projects

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
8	Rural Energy	GEF-2	No	Yes
13	Removal of Barriers to Biomass Power Generation and Co-generation	GEF-2	No	Yes
20	Conservation Planning for Biodiversity in the Thicket Biome	GEF-2	No	Yes
27	Creation and Strengthening of the Capacity for Sustainable Renewable Energy Development in Central America	GEF-2	No	Yes
59	Ship-Generated Waste Management	Pilot	No	Yes
67	Coal-to-Gas Project	Pilot	No	Yes
76	Alternate Energy	Pilot	No	No
91	Small and Medium Scale Enterprise Program	GEF-1	No	No
96	Efficient Lighting Project (PELP)	GEF-1	No	No
104	Energy Services Delivery	GEF-1	No	No
111	Energy Efficiency Co-Financing Program	GEF-1	No	No
112	Photovoltaic Market Transformation Initiative	GEF-1	No	Yes
118	Sustainable and Participatory Energy Management	GEF-1	No	Yes
119	Solar Home Systems (SHS)	GEF-1	No	Yes
126	Brazilian Biodiversity Fund	Pilot	No	Yes
135	Small and Medium Scale Enterprise Program	GEF-1	No	No
267	Energy Efficiency Improvements and Greenhouse Gas Reductions	GEF-1	No	Yes
295	Uganda photovoltaic pilot project for rural electrification	GEF-1	No	No
314	A Program for Rural Electrification with Renewable Energy Using the Popular Participation Law	GEF-1	No	Yes
325	Coal Bed Methane Capture and Commercial Utilization	GEF-1	No	Yes
369	Building Capacity in the Maghreb to Respond to the Challenges and Opportunities Created by National Response to the Framework Convention on Climate Change	Pilot	No	No
371	Decentralized Wind Electric Power for Social and Economic Development (Alizes Electriques)	Pilot	No	Yes
376	Control of Greenhouse Gas Emissions through Energy Efficient Building Technology in West Africa	Pilot	No	Yes
377	Community Based Rangeland Rehabilitation for Carbon Sequestration	Pilot	No	Yes

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
386	Optimizing Development of Small Hydel Resources in Hilly Areas	Pilot	No	Yes
391	Fuel Efficiency in the Road Transport Sector	Pilot	No	Yes
398	Pollution Control and Other Measures to Protect Biodiversity in Lake Tanganyika	Pilot	No	Yes
407	Inventory, Evaluation and Monitoring of Botanical Diversity in Southern Africa: A Regional Capacity and Institution Building Network	GEF-1	No	Yes
444	Energy and Water Sector Reform and Development	GEF-1	No	Yes
448	Industrial Energy Efficiency Improvement Project	GEF-1	No	Yes
449	Photovoltaic-Based Rural Electrification in Peru	GEF-1	No	Yes
466	Promotion of Biodiversity Conservation within Coffee Landscapes	GEF-1	No	Yes
490	Kibale Forest Wild Coffee Project	GEF-2	No	Yes
519	Efficient Lighting Initiative (Tranche I)	GEF-2	No	No
540	Building Chiller Replacement Program	GEF-2	No	Yes
569	Efficient Street Lighting Program	GEF-2	No	Yes
570	Energy Efficiency Market Development	GEF-2	No	Yes
571	Low-Cost/Low-Energy Buildings in the Czech Republic	GEF-2	No	Yes
590	Elimination of Ozone Depleting Substances in the Production of Household Refrigerators and Freezers	GEF-1	No	No
610	Removal of Barriers to the Effective Implementation of Ballast Water Control and Management Measures in Developing Countries	GEF-2	No	Yes
611	Redirecting Commercial Investment Decisions to Cleaner Technologies – A Technology Transfer Clearinghouse	GEF-2	No	Yes
622	Energy Conservation and GHG Emission Reduction in Chinese Township and Village Enterprises (TVE), Phase II	GEF-2	No	Yes
636	Barrier Removal for Cross Sectoral Energy Efficiency	GEF-2	No	Yes
641	Barrier Removal to Renewable Energy Programme	GEF-2	No	No
644	El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes	GEF-2	No	Yes
646	Market Development for Solar Water Heaters	GEF-2	No	Yes
652	CEPALCO Distributed Generation PV Power Plant	GEF-2	No	No
658	Removing Barriers to the Increased Use of Biomass as an Energy Source	GEF-2	No	Yes
660	Barrier Removal to Secure PV Market Penetration in Semi-Urban Sudan	GEF-2	No	No
671	Ecomarkets	GEF-2	No	Yes
773	Caribbean Archipelago Biosphere Reserve: Regional Marine Protected Area System	GEF-2	No	Yes
784	Methane Capture and Use (Landfill Demonstration Project	GEF-2	No	Yes
786	Krakow Energy Efficiency Project	GEF-2	No	Yes
819	Fuel Cell Bus and Distributed Power Generation Market Prospects and Intervention Strategy Options	GEF-2	No	No
840	Caribbean Renewable Energy Development Programme	GEF-2	No	Yes

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
843	Removal of Barriers to Rural Electrification with Renewable Energy	GEF-2	No	Yes
844	Valdivian Forest Zone: Private-Public Mechanisms for Biodiversity Conservation	GEF-2	No	Yes
847	Renewable Energy and Forest Conservation: Sustainable Harvest and Processing of Coffee and Allspice	GEF-2	No	Yes
851	Expedited financing for (interim) measures for capacity building in priority areas	GEF-2	No	No
857	Renewable Energy Systems in the Peruvian Amazon Region (RESPAR)	GEF-2	No	Yes
868	Establishment of Private Natural Heritage Reserves in the Brazilian Cerrado	GEF-2	No	Yes
882	Removing Barriers to Improving Energy Efficiency of the Residential and Service Sectors	GEF-2	No	Yes
883	Energy Efficiency Project	GEF-2	No	Yes
920	Technology Transfer Networks, Phase 1	GEF-2	No	Yes
922	Baltic Sea Regional Project, Tranche 1	GEF-2	No	Yes
935	Barrier Removal to Namibian Renewable Energy Programme, Phase I	GEF-2	No	No
938	Power and Communications Sectors Modernization and Rural Services Project (PROMEC)	GEF-2	No	Yes
941	Demonstration of Fuel Cell Bus Commercialization in China (Phase II-Part I)	GEF-2	No	Yes
944	Energy Efficiency Project	GEF-2	No	Yes
948	Vilnius Heat Demand Management Project	GEF-2	No	Yes
966	End Use Energy Efficiency Project	GEF-3	No	Yes
967	Private Sector Led Development of On-Grid Wind Power in Tunisia	GEF-3	No	Yes
1016	Development of National Implementation Plans for the Management of Persistent Organic Pollutants (POPs)	GEF-2	No	Yes
1061	Inka Terra: An Innovative Partnership for Self-Financing Biodiversity Conservation & Community Development	GEF-3	No	Yes
1084	Caribbean: Mainstreaming Adaptation to Climate Change	GEF-2	No	Yes
1089	Asian Conservation Company (ACC)	GEF-2	No	Yes
1096	Energy Management and Performance Related Energy Savings Scheme (EMPRESS)	GEF-3	No	Yes
1103	Efficient Lighting Market Transformation Project	GEF-3	No	Yes
1137	Promoting the Use of Renewable Energy Resources for Local Energy Supply	GEF-3	No	Yes
1144	Komodo National Park Collaborative Management Initiative	GEF-2	No	Yes
1158	Energy Reform and Access Project	GEF-2	No	Yes
1196	Transformation of the Rural Photovoltaics (PV) Market	GEF-3	No	Yes
1198	Biomass Energy for Heating and Hot Water Supply	GEF-3	No	Yes
1199	Removal of Barriers to Biomass Power Generation, Part I	GEF-3	No	No
1209	Rural Electrification and Renewable Energy Development	GEF-2	No	Yes

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
1237	Energy Conservation Project, Phase II	GEF-2	No	Yes
1245	Renewable Energy-based Rural Electrification	GEF-3	No	Yes
1264	Capacity Building to Remove Barriers to Renewable Energy Development	GEF-2	No	Yes
1265	Polish Energy Efficiency Motors Programme	GEF-2	No	Yes
1281	Solar and Wind Energy Resource Assessment	GEF-2	No	Yes
1291	Renewable Energy Resources Project	GEF-2	No	Yes
1310	Building Wider Public and Private Constituencies for the GEF in Latin America and the Caribbean: Regional Promotion of Global Environment Protection through the Electronic Media	GEF-2	No	Yes
1316	Energy Efficiency Co-Financing Program 2 (HEECP2)	GEF-2	No	No
1335	Bioenergy for Sustainable Rural Development	GEF-3	No	No
1358	Renewable Energy-based Electricity Generation for Isolated Mini-grids	GEF-3	No	Yes
1361	Generation and Delivery of Renewable Energy Based Modern Energy Services in Cuba; the case of Isla de la Juventud	GEF-3	No	Yes
1397	Private Land Mechanisms for Biodiversity Conservation in Mexico	GEF-2	No	Yes
1413	Energy Efficiency Measures in the Honduran Commercial and Industry Sectors	GEF-3	No	Yes
1430	Support for the Implementation of the Stockholm Convention on Persistent Organic Pollutants	GEF-2	No	Yes
1439	Efficient Lighting Initiative (ELI)	GEF-2	No	No
1471	Improving Management of NGO and Privately Owned Nature Reserves and High Biodiversity Islands in Seychelles	GEF-3	No	Yes
1491	Lalkisale Biodiversity Conservation Support Project	GEF-3	No	No
1532	Electric Cooperative System Loss Reduction Project	GEF-3	No	Yes
1541	Commercializing Energy Efficiency Finance (CEEF) - Tranche I	GEF-2	No	No
1558	Obtaining Biofuels and Non-wood Cellulose Fiber from Agricultural Residues/Waste	GEF-2	No	Yes
1571	EcoEnterprises Fund	GEF-2	No	Yes
1591	Regional Program of Action and Demonstration of Sustainable Alternatives to DDT for Malaria Vector Control in Mexico and Central America	GEF-2	No	Yes
1609	Renewable Energy Enterprise Development - Seed Capital Access Facility	GEF-3	No	No
1646	Cost Effective Energy Efficiency Measures in the Russian Educational Sector	GEF-2	No	Yes
1685	FC-1: Fuel Cells Financing Initiative for Distributed Generation Applications (Phase 1)	GEF-3	No	No
1702	Rehabilitation and Expansion of Small Hydro-Plants on the River Raba in Hungary	GEF-3	No	Yes
1735	Conservation of Dry Forest and Coastal Biodiversity of the Pacific Coast of Southern Nicaragua: Building Private-Public Partnerships	GEF-3	No	Yes

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
1794	Removing Obstacles to Direct Private-Sector Participation in In-situ Biodiversity Conservation	GEF-3	No	Yes
1838	Energy and Environment Upgrading of the Industrial Park of Sidi Bernoussi Zenata, Casablanca	GEF-3	No	Yes
1839	Private Sector/GEF Co-financing of Global Warming Mitigation in Cameroon through Biomass Conservation, Restoration	Pilot Phase	No	No
1859	Conservation of the Eg-Uur Watershed	GEF-3	No	Yes
1897	Building Integrated Photovoltaic (BIPV) Technology Application Project	GEF-3	No	No
1899	Regional Programme on Electrical Energy Efficiency in Industrial and Commercial Service Sectors in Central America	GEF-3	No	Yes
1900	Large Scale Renewable Energy Development Project	GEF-3	No	No
1904	Small Scale Hydro Power Development in Haiti	GEF-4	No	No
1905	Development of an Energy Efficiency Program for the Industrial Sector for Tunisia	GEF-3	No	Yes
1916	Marine Aquarium Market Transformation Initiative (MAMTI)	GEF-3	No	No
2000	Environmental Business Finance Program (EBFP)	GEF-3	No	No
2105	Conservation and Sustainable Use of Biodiversity in the Dalmatian Coast through Greening Coastal Development	GEF-3	No	Yes
2108	Philippines Sustainable Energy Finance Program	GEF-3	No	No
2111	Russian Sustainable Energy Finance Program	GEF-3	No	Yes
2117	Energy Efficiency Project	GEF-3	No	Yes
2119	African Rift Geothermal Development Facility (ARGeo)	GEF-3	No	No
2129	Demonstrating and Capturing Best Practices and Technologies for the Reduction of Land-sourced Impacts Resulting from Coastal Tourism	GEF-3	No	Yes
2138	Livestock Waste Management in East Asia	GEF-3	No	Yes
2139	SIP: Transboundary Agro-Ecosystem Management Programme for the Kagera River Basin (Kagera TAMP)	GEF-4	No	No
2174	Commercializing Energy Efficiency Finance (CEEF) - Tranche II	GEF-2	No	Yes
2188	East Asian Seas Region: Development and Implementation of Public Private Partnerships in Environmental Investments	GEF-3	No	Yes
2194	Developing the Legal and Regulatory Framework for Wind Power in Russia	GEF-3	No	Yes
2244	Building the Local Capacity for Promoting Energy Efficiency in Private and Public Buildings	GEF-3	No	Yes
2256	Barrier Removal to Namibian Renewable Energy Programme (NAMREP), Phase II	GEF-3	No	Yes
2355	Agricultural Productivity and Sustainable Land Management	GEF-3	No	No
2376	Renewable Energy Project (RREP)	GEF-4	No	No
2423	Assessment of Existing Capacity and Capacity Building Needs to Analyze POPs in Developing Countries	GEF-3	No	Yes
2489	Rural Infrastructure (Electrification Sector)	GEF-3	No	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
2531	Sustainable Energy Program	GEF-3	No	Yes
2538	Assessment of Risk Management Instruments for Financing Renewable Energy	GEF-3	No	Yes
2554	Energy Efficiency Codes in Residential Buildings and Energy Efficiency Improvement in Commercial and Hospital Buildings in Morocco	GEF-3	No	Yes
2555	Promotion of a Wind Power Market	GEF-3	No	No
2589	Institutionalizing Payments for Ecosystem Services	GEF-3	No	Yes
2607	Rural Electrification	GEF-3	No	No
2611	Integrated Energy Services for Small Localities of Rural Mexico	GEF-3	No	No
2618	Biodiversity and Agricultural Commodities Program (BACP), Phase 1	GEF-3	No	Yes
2619	Financing Energy Efficiency and Renewable Energy Investments for Climate Change Mitigation	GEF-3	No	No
2624	China Utility-Based Energy Efficiency Finance Program (CHUEE)	GEF-3	No	Yes
2670	Central American Markets for Biodiversity (CAMBio): Mainstreaming Biodiversity Conservation and Sustainable use within Micro, Small and Medium-sized Enterprise Development and Financing	GEF-3	No	No
2806	Promoting Payments for Environmental Services (PES) and Related Sustainable Financing Schemes in the Danube Basin	GEF-4	No	Yes
2820	Supporting the Development and Implementation of Access and Benefit Sharing Policies in Africa	GEF-4	No	No
2870	Market Transformation for Efficient Biomass Stoves for Institutions and Small and Medium-Scale Enterprises	GEF-3	No	Yes
2886	Energy Development and Access Project (formerly) Development of Renewable Energy and Energy Efficiency	GEF-3	No	No
2889	Zambezi Valley Market Led Smallholder Development	GEF-3	No	No
2900	GEF- Development Marketplace Partnership	GEF-3	No	No
2918	Sustainable Energy Development Project (SEDP)	GEF-3	No	No
2926	Environmentally Sound Management and Disposal of Obsolete POPs Pesticides and Other POPs Wastes	GEF-4	No	No
2939	Solar Water Heating Market Transformation and Strengthening Initiative, Phase 1	GEF-3	No	No
2941	Market Transformation for Energy Efficiency in Buildings	GEF-4	No	No
2944	Sustainable Energy Financing	GEF-3	No	No
2950	Lighting the "Bottom of the Pyramid"	GEF-3	No	No
2996	Portfolio Approach to Distributed Generation Opportunity (PADGO) (Phase 1)	GEF-3	No	Yes
3000	SFM: Sustainable Management of the Miombo Woodland Resources of Western Tanzania	GEF-4	No	No
3005	CleanTech Fund	GEF-3	No	No
3020	FC-1: Sub-project 1st Group/Plug Power - under the Global Fuel Cells Financing Initiative for Distributed Generation Applications (Phase 1)	GEF-3	No	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
3022	FC-1: Sub-project 1st Group/Plug Power - under the Global Fuel Cells Financing Initiative for Distributed Generation Applications (Phase 1)	GEF-3	No	No
3156	Coping with Drought and Climate Change	GEF-3	No	No
3181	Pollution Reduction through Improved Municipal Wastewater Management in Coastal Cities in ACP Countries with a Focus on SIDS	GEF-3	No	Yes
3243	Climate Change Adaptation Project, Phase I	GEF-4	No	No
3282	Establishment of PCB Waste Management and Disposal System	GEF-4	No	No
3287	Community Based Adaptation to Climate Change through Coastal Afforestation	GEF-4	No	No
3357	The GEF Earth Fund (formerly GEF Public-Private Partnership Fund)	GEF-4	No	No
3359	Promoting Renewable Energy in Mae Hong Son Province	GEF-4	No	No
3376	SIP: Private Public Sector Partnership on Capacity Building for SLM in the Shire River Basin	GEF-4	No	No
3386	SIP: Innovations in Micro Irrigation for Dryland Farmers	GEF-4	No	Yes
3418	Mainstreaming Biodiversity Management into Medicinal and Aromatic Plants Production Processes	GEF-4	No	Yes
3445	SFM: Integrated Community-based Forest and Catchment Management through an Ecosystem Service Approach (CBFCM)	GEF-4	No	No
3461	Promoting Sustainable Transport Solutions for East Africa	GEF-4	No	No
3470	SLEM/CPP: Sustainable Rural Livelihood Security through Innovations in Land and Ecosystem Management	GEF-4	No	No
3540	Industrial Energy Efficiency in Key Sectors	GEF-4	No	No
3541	TT-Pilot (GEF 4): Phase Out HCFCs and Promotion of HFC-free Energy Efficient Refrigeration and Air-Conditioning Systems in the Russian Federation Through Technology Transfer	GEF-4	No	No
3558	SP-SFIF: West Africa Regional Fisheries Program (WARFP)	GEF-3	No	No
3565	Market Transformation of Energy Efficient Appliances in Turkey	GEF-4	No	No
3597	RUS Improving Urban Housing Efficiency in the Russian Federation	GEF-4	No	No
3626	PAS: The Micronesia Challenge: Sustainable Finance Systems for Island Protected Area Management - under the GEF Pacific Alliance for Sustainability	GEF-4	No	No
3679	Economic Analysis of Adaptation Options in Support of Decision Making	GEF-4	No	No
3732	Demonstration of BAT and BEP in Fossil Fuel-fired Utility and Industrial Boilers in Response to the Stockholm Convention on POPs	GEF-4	No	No
3753	Sustainable Financing of the Protected Area System in Mozambique	GEF-4	No	No
3766	Testing a Prototype Caribbean Regional Fund for Wastewater Management (CReW)	GEF-4	No	No
3791	Energy Efficiency Standards and Labels in Peru	GEF-4	No	No
3800	LGGE Policy Reforms and Market Transformation of the Energy Efficient Buildings Sector in the I.R. Iran	GEF-4	No	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
3801	Strengthening the Implementation of the Biological Diversity Act and Rules with Focus on its Access and Benefit Sharing Provisions	GEF-4	No	No
3803	Environmentally Sound Management of Medical Wastes in India	GEF-4	No	No
3825	Mountains and Markets: Biodiversity and Business in Northern Pakistan	GEF-4	No	No
3844	Sustainable Rural Biomass Energy	GEF-4	No	No
3849	Improving the Financial Sustainability of the Carpathian System of Protected Areas	GEF-4	No	Yes
3855	Strengthening the Implementation of Access to Genetic Resources and Benefit-Sharing Regimes in Latin America and the Caribbean	GEF-4	No	No
3876	SPWA-CC: Promotion of Energy Efficiency Lighting in Public, Commercial and Residential Buildings	GEF-4	No	No
3889	Mainstreaming biodiversity conservation through low-impact ecotourism in the SINAP	GEF-4	No	No
3890	Vulnerability Assessment and Adaptation Programme for Climate Change in the Coastal Zone of Cambodia Considering Livelihood Improvement and Ecosystems	GEF-4	No	No
3901	LGGE: Energy Efficiency in Public Buildings (EEPb)	GEF-4	No	Yes
3908	CF Industrial Energy Efficiency for Malaysian Manufacturing Sector (IEEMMS)	GEF-4	No	No
3921	Promoting Sustainable Energy Production and Use from Biomass in Pakistan	GEF-4	No	No
3922	SPWA-CC: Promoting Renewable Energy Based Mini Grids for Productive Uses in Rural Areas in The Gambia	GEF-4	No	No
3930	Energy Efficiency Standards and Labels in Colombia (S&L Colombia)	GEF-4	No	No
3937	SPWA-CC: Promoting Mini Grids Based on Small Hydropower for Productive Uses in Sierra Leone	GEF-4	No	No
3941	IND-BD Mainstreaming Coastal and Marine Biodiversity Conservation into Production Sectors in the Malvan Coast, Maharashtra State	GEF-4	No	No
3946	Ensuring Financial Sustainability of the Protected Area System	GEF-4	No	No
3947	Catalyzing Financial Sustainability of the PA System	GEF-4	No	Yes
3951	Expanding FSC Certification at Landscape-level through Incorporating Additional Eco-system Services.	GEF-4	No	No
3958	SPWA-CC: Promoting Development of Multi-purpose Mini-hydro Power Systems	GEF-4	No	No
3959	SPWA-CC: Promoting renewable energy based mini-grids for rural electrification and productive uses	GEF-4	No	No
3973	Armenia Energy Efficiency Project	GEF-4	No	No
4000	PAS: Low Carbon-Energy Islands - Accelerating the Use of Energy Efficient and Renewable Energy Technologies in Tuvalu, Niue and Nauru	GEF-4	No	No
4004	Mini-Grids Based on Small Hydropower Sources to Augment Rural Electrification	GEF-4	No	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
4005	SPWA-CC: Promoting Renewable Energy-based Grids in Rural Communities for Productive Uses	GEF-4	No	No
4020	Market Policy and Legislative Development for Mainstreaming the Sustainable Management of Marine and Coastal Ecosystems in Lebanon	GEF-4	No	No
4027	Global Partnership with Fisheries Industry for the Sustainability of Living Aquatic Resources	GEF-4	No	Yes
4035	MENARID: Ecotourism and Conservation of Desert Biodiversity	GEF-4	No	No
4037	TT-Pilot (GEF-4): Overcoming Policy, Market and Technological Barriers to Support Technological Innovation and South-South Technology Transfer: The Pilot Case of Ethanol Production from Cassava	GEF-4	No	No
4042	TT-Pilot (GEF-4): Climate Change Related Technology Transfer for Cambodia: Using Agricultural Residue Biomass for Sustainable Energy Solutions	GEF-4	No	No
4068	Increasing Resilience to Climate Variability and Hazards	GEF-4	No	No
4070	The GEF Earth Fund: Greening the Cocoa Industry - Market Transformation	GEF-4	No	No
4080	SPWA-BD: Participatory Biodiversity Conservation and Low Carbon Development in Pilot Ecovillages in Senegal	GEF-4	No	No
4096	Promoting Sustainable Biomass Energy Production and Modern Bio-Energy Technologies	GEF-4	No	No
4099	Removal of Barriers to Solar PV Power Generation in Mauritius, Rodrigues and the Outer Islands	GEF-4	No	No
4129	TT-Pilot (GEF-4)- Green Truck Demonstration Project	GEF-4	No	No
4132	TT-Pilot (GEF 4): Promotion and Development of Local Wind Technologies in Mexico	GEF-4	No	No
4147	Industrial Energy Efficiency in Ecuador	GEF-4	No	No
4171	Energy for Sustainable Development in Caribbean Buildings	GEF-4	No	No
4176	Encouraging the Establishment and Consolidation of an Energy Service Market in Chile	GEF-4	No	No
4191	Promoting Ecotourism to Strengthen the Financial Sustainability of the Guatemalan Protected Areas System (SIGAP)	GEF-4	No	No
4222	Promoting Autonomous Adaptation at the community level in Ethiopia	GEF-4	No	No
4224	GEO: Turkey Geofund	GEF-3	No	No
4236	GHG Assessment Methodologies in Public Transport	GEF-4	No	No
4257	The GEF Earth Fund: IFC Earth Fund Platform	GEF-4	No	No
4259	The GEF Earth Fund: Conservation Agreement Private Partnership Platform (CAPPP)	GEF-4	No	No
4260	The GEF Earth Fund: Public-Private Funding Mechanisms for Watershed Protection	GEF-4	No	No
4283	PAS: PNG Energy Sector Development Project	GEF-4	No	No
4285	Promoting Energy Efficiency Technologies in Beer Brewing Sector in Burkina Faso	GEF-4	No	Yes

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
4336	Lighting One Million Lives in Liberia	GEF-5	No	No
4345	Renewable Energy for Rural Livelihood (RERL)	GEF-5	No	No
4348	Reducing GHG Emissions through a Resource Efficiency Transformation Programme (ResET) for Industries in Kazakhstan	GEF-5	No	No
4421	The GEF Earth Fund: Global Market Transformation for Efficient Lighting	GEF-4	No	No
4427	Russia Energy Efficiency Financing (REEF) Project	GEF-5	No	No
4431	Increasing Climate Change Resilience of Maldives through Adaptation in the Tourism Sector	GEF-5	No	No
4434	Strengthening the Adaptive Capacity and Resilience of Rural Communities Using Micro Watershed Approaches to Climate Change and Variability to Attain Sustainable Food Security	GEF-5	No	No
4453	Adaptation of Small-scale Agriculture (LASAP)	GEF-5	No	No
4459	Development of Sustainable Renewable Energy Power Generation (SREPGen)	GEF-5	No	No
4477	Comprehensive Reduction and Elimination of Persistent Organic Pollutants in Pakistan	GEF-5	No	No
4497	Development of Renewable Energy, Energy Efficiency and Electrification of Suriname	GEF-5	No	No
4512	Pilot Asia-Pacific Climate Technology Network and Finance Center	GEF-5	No	No
4514	Greening the COP17 in Durban	GEF-5	No	Yes
4515	Southeastern Europe and Caucasus Catastrophe Risk Insurance Facility (SEEC CRIF)	GEF-5	Yes	No
4570	Adapting Agriculture Production in Togo (ADAPT)	GEF-5	No	No
4586	Mainstreaming Biodiversity Conservation in Tourism Sector Development in Jordan	GEF-5	No	No
4590	Delivering Multiple Global Environment Benefits through Sustainable Management of Production Landscapes	GEF-5	No	No
4599	Building Adaptive Capacity to Catalyze Active Public and Private Sector Participation to Manage the Exposure and Sensitivity of Water Supply Services to Climate Change in Sierra Leone	GEF-5	No	No
4626	Geothermal Power Generation Program	GEF-5	No	No
4629	Strengthening Low-Carbon Energy Island Strategies	GEF-5	Yes	No
4631	Watershed Approach to Sustainable Coffee Production in Burundi	GEF-5	No	No
4657	Competitiveness and Sustainable Rural Development Project in the South Western Border Corridor (PROLENCA-GEF)	GEF-5	No	No
4682	SolarChill Development, Testing and Technology Transfer Outreach	GEF-5	No	No
4683	ARCTIC: Targeted Support for Energy Efficiency and Renewable Energy in the Russian Arctic	GEF-5	No	No
4701	Scaling up Community-Based Adaptation (CBA) in Niger	GEF-5	Yes	No
4718	Production of Sustainable, Renewable Biomass-based Charcoal for the Iron and steel Industry in Brazil	GEF-5	Yes	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
4724	Enhancing Resilience of Vulnerable Coastal Areas and Communities to Climate Change in the Republic of Gambia	GEF-5	No	No
4725	Solomon Islands Water Sector Adaptation Project (SIWSAP)	GEF-5	No	No
4741	Integrated and Environmentally Sound PCBs Management in Ecuador	GEF-5	No	No
4742	Green Urban Lighting	GEF-5	Yes	No
4745	Promoting Utility-Scale Power Generation from Wind Energy	GEF-5	No	No
4753	Sustainable Energy Initiative for Industries	GEF-5	No	No
4780	Promoting the application of the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing in Panama	GEF-5	No	No
4784	Introduction of Energy Management System Standard in Ukrainian Industry	GEF-5	No	No
4785	Promoting Integrated Biomass and Small Hydro Solutions for Productive Uses in Cameroon	GEF-5	No	No
4788	Promoting Business Models for Increasing Penetration and Scaling up of Solar Energy	GEF-5	No	No
4790	Utilizing Solar Energy for Industrial Process Heat in Egyptian Industry	GEF-5	Yes	No
4801	Promotion of Non-fired Brick (NFB) Production and Utilization	GEF-5	No	No
4840	Energy Efficient Production and Utilization of Charcoal through Innovative Technologies and Private Sector Involvement	GEF-5	No	No
4866	Promoting Energy Efficiency in Industrial Heat Systems and High Energy-consuming (HEC) Equipment	GEF-5	No	No
4881	Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Latin American and Caribbean Region	GEF-5	Yes	No
4884	Nationally Appropriate Mitigation Actions in the Energy Generation and End-Use Sectors	GEF-5	No	No
4890	Towards a Green Economy in Uruguay: Stimulating Sustainable Production Practices and Low-emission Technologies in Prioritized Sectors	GEF-5	No	No
4899	Promoting Energy Efficiency for Non-HCFC Refrigeration and Air Conditioning (PENHRA)	GEF-5	Yes	No
4900	Scale Up of Access to Clean Energy for Rural Productive and Domestic Uses	GEF-5	No	No
4902	Catalyzing Market Transformation for Industrial Energy Efficiency and Accelerate Investments in Best Available Practices and Technologies in the Former Yugoslav Republic of Macedonia	GEF-5	Yes	No
4904	Pilot African Climate Technology Finance Center and Network	GEF-5	Yes	No
4918	Partial Risk Sharing Facility for Energy Efficiency	GEF-5	No	No
4921	Efficient and Sustainable City Bus Services	GEF-5	No	No
4923	Promotion of Mini and Micro-hydro Power Plants in Congo DR	GEF-5	No	No
4927	Facility for Low Carbon Technology Deployment	GEF-5	Yes	No
4929	AfDB-PPP Public-Private Partnership Program	GEF-5	No	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
4936	EAS Reducing Pollution and Rebuilding Degraded Marine Resources in the East Asian Seas through Implementation of Intergovernmental Agreements and Catalyzed Investments	GEF-5	Yes	No
4957	Small and Medium Enterprise Energy Efficiency Project	GEF-5	Yes	No
4958	Climate Risk Finance for Sustainable and Climate Resilient Rainfed Farming and Pastoral Systems	GEF-5	No	No
4959	IDB-PPP MIF Public-Private Partnership Program	GEF-5	No	No
4967	Scaling up Risk Transfer Mechanisms for Climate Vulnerable Agriculture-based Communities in Mindanao	GEF-5	No	No
4974	Enhancing Adaptive Capacity and Resilience to Climate Change in the Agriculture Sector in Comoros	GEF-5	No	No
4991	Strengthening Climate Information and Early Warning Systems in Tanzania to Support Climate Resilient Development and Adaptation to Climate Change	GEF-5	No	No
5002	Strengthening Climate Information and Early Warning Systems in Western and Central Africa for Climate Resilient Development and Adaptation to Climate Change	GEF-5	No	No
5015	Implementing Urgent Adaptation Priorities Through Strengthened Decentralized and National Development Plans.	GEF-5	No	No
5038	Implementation of BAT and BEP for Reduction of UP-POPs Releases from Open Burning Sources in Armenia	GEF-5	No	No
5055	ASTUD: Mongolia Urban Transport Development Investment Program	GEF-5	No	No
5059	Nationally Appropriate Mitigation Actions for Low-carbon Urban Development	GEF-5	Yes	No
5063	Catalysing the Use of Solar Photovoltaic Energy	GEF-5	No	No
5064	Grid-connected Small Scale Photovoltaic Systems	GEF-5	Yes	No
5086	Achieving Low Carbon Growth in Cities through Sustainable Urban Systems Management in Thailand (LCC)	GEF-5	No	No
5087	Organic Waste Streams for Industrial Renewable Energy Applications in India	GEF-5	No	No
5088	Conserving Biodiversity in Coastal Areas Threatened by Rapid Tourism and Physical Infrastructure Development	GEF-5	No	No
5091	Mainstreaming Biodiversity Conservation and Sustainable Use into NTFP and AFS Production Practices in Multiple-Use Forest Landscapes of High Conservation Value	GEF-5	Yes	No
5111	Reducing Vulnerability and Increasing Adaptive Capacity to Respond to Impacts of Climate Change and Variability for Sustainable Livelihoods in Agriculture Sector in Nepal	GEF-5	No	No
5143	PPP-EBRD South Eastern Mediterranean EE/ESCO Markets Platform	GEF-5	No	No
5145	GEF UNIDO Cleantech Programme for SMEs	GEF-5	No	No
5147	Enhancing Resilience of Agricultural Sector in Georgia (ERASIG)	GEF-5	No	No
5150	Delivering the Transition to Energy Efficient Lighting	GEF-5	Yes	No
5152	Delivering the Transition to Energy Efficient Lighting	GEF-5	Yes	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
5157	ESCO Moldova - Transforming the market for Urban Energy Efficiency in Moldova by Introducing Energy Service Companies	GEF-5	No	No
5170	Discovering Nature-based Products and Build National Capacities for the Application of the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing	GEF-5	No	No
5211	Integrated Water Harvesting Technologies to Adapt to Climate Change Induced Water Shortage	GEF-5	No	No
5226	Improving Women and Children's Resilience and Capacity to Adapt to Climate Change in the Democratic Republic of the Congo	GEF-5	No	No
5233	Enabling Climate Resilience in the Agriculture Sector in the Southwest Region of Madagascar	GEF-5	No	No
5291	Nationally Appropriate Mitigation Actions (NAMAs) for Low-carbon End-use Sectors in Azerbaijan	GEF-5	Yes	No
5297	Promoting Access to Clean Energy Services in Saint Vincent and the Grenadines	GEF-5	Yes	No
5299	Delivering the Transition to Energy Efficient Lighting	GEF-5	Yes	No
5316	Promotion and Up-scaling of Climate-resilient, Resource Efficient Technologies in a Tropical Island Context	GEF-5	No	No
5317	Increased Energy Access for Productive Use through Small Hydropower Development in Rural Areas	GEF-5	Yes	No
5339	Market Transformation through Design and Implementation of Appropriate Mitigation Actions in Energy Sector	GEF-5	Yes	No
5341	South Africa Wind Energy Project (SAWEP) Phase II	GEF-5	Yes	No
5344	Cape Verde Appliances & Building Energy-Efficiency Project (CABEEP)	GEF-5	Yes	No
5379	Industrial Energy Efficiency Improvement in South Africa through Mainstreaming the Introduction of Energy Management Systems and Energy Systems Optimization	GEF-5	Yes	No
5388	PPP-IDB Sustainable Caribbean Basin Private Equity Fund	GEF-5	Yes	No
5420	Promoting the Application of the Nagoya Protocol through the Development of Nature-based Products, Benefit-sharing and Biodiversity Conservation	GEF-5	Yes	No
5421	Reduction of GHG Emission through Promotion of Commercial Biogas Plants	GEF-5	Yes	No
5452	Guangdong Agricultural Pollution Control	GEF-5	Yes	No
5453	Disaster Risk & Energy Access Management (DREAM):Promoting Solar Photovoltaic Systems in Public Buildings for Clean Energy Access, Increased Climate Resilience and Disaster Risk Management	GEF-5	Yes	No
5466	Reducing Greenhouse Gases and ODS Emissions through Technology Transfer in the Industrial Refrigeration and Air Conditioning Sector	GEF-5	Yes	No
5501	Promoting Sustainable Rural Energy Technologies (RETs) for Household and Productive Uses	GEF-5	Yes	No
5505	GEF UNIDO Cleantech Programme for SMEs in Turkey	GEF-5	Yes	No
5530	Green Shipping Programme for Russia	GEF-5	No	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
5532	Disposal of PCB Oils Contained in Transformers and Disposal of Capacitors Containing PCB in Southern Africa	GEF-5	Yes	No
5586	Appropriate Mitigation Actions in the Energy Generation and End-Use Sectors in Sri Lanka	GEF-5	Yes	No
5604	Technology Transfer for Climate Resilient Flood Management in Vrbas River Basin	GEF-5	Yes	No
5609	Greening the Productive Sectors in Gambia: Promoting the Use and Integration of Small to Medium Scale Renewable Energy Systems in the Productive Uses	GEF-5	Yes	No
5610	Reducing GHG Emissions Through Community Forests and Sustainable Biomass Energy in Afghanistan	GEF-5	Yes	No
5685	Increasing Productivity and Adaptive Capacity in Mountain Areas of Morocco (IPAC-MAM)	GEF-5	No	No
5701	Reducing Environmental and Health Risks to Vulnerable Communities from Lead Contamination from Lead Paint and Recycling of Used Lead Acid Batteries	GEF-5	Yes	No
5704	Promoting Organic Waste-to-Energy and other Low-carbon Technologies in Small and Medium-scale Enterprises (SMMEs): Accelerating Biogas Market Development	GEF-5	No	No
5721	Rhino Impact Bonds An Innovative Financing Mechanism for Site-Based Rhinoceros Conservation	GEF-5	Yes	No
5732	Sustainable Energy Financing Mechanism for Solar PV in Forest Villages in Turkey	GEF-5	Yes	No
5742	Development of Cornerstone Public Policies and Institutional Capacities to Accelerate Sustainable Energy for All (SE4A) Progress	GEF-5	Yes	No
5750	Mainstreaming Sustainable Management of Tea Production Landscapes	GEF-5	Yes	No
5754	IDB-GEF Climate-Smart Agriculture Fund for Latin America and the Caribbean	GEF-5	Yes	No
5776	Supply Change Securing Food Sustaining Forests	GEF-5	No	No
5799	Delivering the Transition to Energy Efficient Lighting in Residential, Commercial, Industrial, and Outdoor Sectors	GEF-5	Yes	No
5800	GEF UNIDO Cleantech Programme for SMEs	GEF-5	No	No
5820	Promoting the Application of the Nagoya Protocol on ABS	GEF-5	Yes	No
5830	Nationally Appropriate Mitigation Actions in the Construction Sector in Mongolia	GEF-5	Yes	No
5831	Establishing the Foundations of a Partnership to Accelerate the Global Market Transformation for Efficient Appliances and Equipment	GEF-5	Yes	No
5839	Mitigating Deforestation in Brazil Nut Concessions in Madre de Dios, Peru	GEF-5	Yes	No
5841	NAMA Pilot Implementation of Technology Transfer Projects in the Industrial Sector of the Cundinamarca-Bogotá Region	GEF-5	Yes	No
5843	Deployment of Renewable Energy and Improvement of Energy Efficiency in the Public Sector	GEF-5	Yes	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
5846	Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector	GEF-5	Yes	No
6913	Market Transformation for Sustainable Rural Housing Project	GEF-6	Yes	No
6919	Upgrading of China SHP Capacity Project	GEF-6	Yes	No
6921	Demonstration of Mercury Reduction and Minimization in the Production of Vinyl Chloride Monomer	GEF-6	Yes	No
6925	Umbrella Programme for Biennial Update Report to the United National Framework Convention on Climate Change (UNFCCC)	GEF-6	No	No
6928	Reducing UPOPs and Mercury Releases from Healthcare Waste Management, e-Waste Treatment, Scrap Processing and Biomass Burning	GEF-6	Yes	No
6930	Energy Efficiency Improvement in Public Sector Buildings	GEF-6	No	No
6942	Finance and Technology Transfer Centre for Climate Change (FINTECC)	GEF-6	No	No
6951	Enhancing the Climate Resilience of the Moroccan Ports Sector	GEF-6	No	No
6952	Implementation of the Strategic Action Program of the Gulf of Mexico Large Marine Ecosystem	GEF-6	No	No
6955	Strengthening the Adaptive Capacity to Climate Change in the Fisheries and Aquaculture Sector	GEF-6	No	No
6960	Supporting Climate Resilient Livelihoods in Agricultural Communities in Drought-prone Areas	GEF-6	No	No
6966	UPOPs Reduction through BAT/BEP and PPP-based Industry Chain Management in Secondary Copper Production Sector in China	GEF-6	Yes	No
6974	Improving Mobility in Parakou	GEF-6	No	No
6978	Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Pacific Region	GEF-6	Yes	No
6980	The International Lighting Efficiency Facility (iLEF)(nongrant)	GEF-6	Yes	No
8000	Improve Mercury Management in Tunisia	GEF-6	Yes	No
8005	Sustainable Land Management for Increased Productivity in Armenia (SLMIP)	GEF-6	No	No
8017	GEF-6 POPs Legacy and Sustainable Chemicals Management	GEF-6	Yes	No
8025	Effective Implementation of the Access and Benefit Sharing and Traditional Knowledge Regime in Peru in accordance with the Nagoya Protocol	GEF-6	Yes	No
9037	Sustainable Forest and Land Management	GEF-6	No	No
9040	Sustainable Development of Comoros Islands by Promoting the Geothermal Energy Sources	GEF-6	No	No
9042	Moldova Sustainable Green Cities: Catalyzing Investment in Sustainable Green Cities in the Republic of Moldova Using a Holistic Integrated Urban Planning Approach	GEF-6	No	No
9043	Investing in Renewable Energy Project Preparation under the Sustainable Energy Fund for Africa (SEFA)	GEF-6	Yes	No
9045	Comprehensive Environmentally Sound Management of PCBs in Montenegro	GEF-6	Yes	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
9046	Reduction and Phase-out of PFOS in Priority Sectors in China	GEF-6	Yes	No
9047	Green Logistics Program	GEF-6	Yes	No
9051	Moringa Agro-forestry Fund for Africa	GEF-6	Yes	No
9053	Reducing Argentina's Greenhouse Gas Emissions from the Energy Sector through the Utilization of Organic Waste for Energy Generation in Agriculture and Agro Industries	GEF-6	Yes	No
9056	Promotion of Small Hydro Power (SHP) for Productive Use and Energy Services	GEF-6	Yes	No
9057	Biogas Applications for the Brazilian Agro-industry	GEF-6	Yes	No
9058	Impact Investment in Support of the Implementation of the Nagoya Protocol on Access and Benefit Sharing (nongrant)	GEF-6	Yes	No
9067	Renewable Energy Sector Project	GEF-6	No	No
9070	Food-IAP: Fostering Sustainability and Resilience for Food Security in Sub-Saharan Africa - An Integrated Approach	GEF-6	No	No
9071	Global Partnership on Wildlife Conservation and Crime Prevention for Sustainable Development	GEF-6	Yes	No
9072	Comm-IAP: Taking Deforestation Out of Commodity Supply Chains	GEF-6	Yes	No
9078	Implementation of PCB Management Programs for Electric Cooperatives and Safe e-wastes Management	GEF-6	Yes	No
9079	Environmentally Sound Management of Products and Wastes Containing POPs and Risks Associated with their Final Disposal	GEF-6	Yes	No
9081	Promoting Energy-Efficient Motors in Small and Medium Sized Enterprises (SMEs)	GEF-6	Yes	No
9083	LF Leapfrogging Markets to High Efficiency Products (Appliances, including Lighting, and Electrical Equipment)	GEF-6	Yes	No
9085	Equity Fund for the Small Projects Independent Power Producer Procurement Programme (nongrant)	GEF-6	Yes	No
9103	Building Adaptive Capacity through the Scaling-up of Renewable Energy Technologies in Rural Cambodia (S-RET)	GEF-6	No	No
9112	The Ten Island Challenge: Derisking the Transition of the Caribbean from Fossil Fuels to Renewables	GEF-6	Yes	No
9115	IBRD Geothermal Energy Upstream Development Project	GEF-6	Yes	No
9116	Promoting Access to Renewable Energy and Development of IT Tools for Rural Communities of Cameroon	GEF-6	No	No
9133	Food-IAP: Climate-Smart Agriculture for Climate-Resilient Livelihoods (CSARL)	GEF-6	No	No
9136	Niger: Food-IAP: Family Farming Development Programme (ProDAF)	GEF-6	No	No
9139	Food-IAP: Establishment of the Upper Tana Nairobi Water Fund (UTNWF)	GEF-6	No	No
9141	GEF-IAP: Participatory Natural Resource Management and Rural Development Project in the North, Centre-North and East Regions (Neer Tamba project)	GEF-6	No	No
9146	Vientiane Sustainable Urban Transport Project	GEF-6	No	No
9151	Catalyzing Environmental Finance for Low-Carbon Urban Development	GEF-6	No	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
9189	Reduction and Elimination of POPs and Other Chemical Releases through Implementation of Environmentally Sound Management of E-Waste, Healthcare Waste and Priority U-POPs Release Sources Associated with General Waste Management Activities	GEF-6	Yes	No
9191	Green Energy SMEs Development Project	GEF-6	No	No
9192	De-risking Renewable Energy Investment	GEF-6	Yes	No
9204	A Systemic Approach to Sustainable Urbanization and Resource Efficiency in Greater Amman Municipality (GAM)	GEF-6	No	No
9210	NAMA on Integrated Waste Management and Biogas in Uganda	GEF-6	Yes	No
9214	Environmentally Sound Management and Destruction of PCBs in Mexico: Second Phase	GEF-6	Yes	No
9218	Sustainable Use of Biomass to Assist the Development of Turkey's Economy Towards a Low-carbon Development Path	GEF-6	No	No
9220	Facilitation of the Achievement of Sustainable National Energy Targets of Tuvalu (FASNETT)	GEF-6	Yes	No
9222	Greening the Scrap Metal Value Chain through Promotion of BAT/BEP to Reduce U-POPs Releases from Recycling Facilities	GEF-6	Yes	No
9225	Towards Sustainable Energy for All in Mozambique: Promoting Market-Based Dissemination of Integrated Renewable Energy Systems for Productive Activities in Rural Areas	GEF-6	Yes	No
9226	Integrated Adoption of New Energy Vehicles in China	GEF-6	Yes	No
9236	Environmentally Sound Management and Disposal of PCBs	GEF-6	Yes	No
9249	Grid-Connected Rooftop Solar PV Program	GEF-6	Yes	No
9251	Improving the Performance and Reliability of RE Power Systems in Samoa (IMPRESS)	GEF-6	Yes	No
9255	Development of Value Chains for Products derived from Genetic Resources in Compliance with the Nagoya Protocol on Access and Benefit Sharing and the National Biodiversity Economy Strategy	GEF-6	Yes	No
9258	Creating and Sustaining Markets for Energy Efficiency	GEF-6	No	No
9273	Facilitating Renewable Energy & Energy Efficiency Applications for Greenhouse Gas Emission Reduction (FREAGER)	GEF-6	No	No
9277	Risk Mitigation Instrument for Land Restoration	GEF-6	Yes	No
9279	Sustainable Cities: Integrated Green Urban Development in Ashgabat and Awaza	GEF-6	No	No
9281	Promotion of Bio-Ethanol as Alternative Clean Fuel for Cooking in the United Republic of Tanzania	GEF-6	Yes	No
9283	Development of a Market for Energy Efficient Lighting, Air Conditioners and Refrigerators	GEF-6	No	No
9291	Promotion of Small Hydropower Based Mini-Grids for a Better Access to Modern Energy Services in Central African Republic	GEF-6	No	No
9292	Increasing Energy Access through the Promotion of Energy Efficient Appliances in Liberia	GEF-6	No	No
9309	The Climate Finance Aggregation Initiative for Developing Countries	GEF-6	No	No
9320	Increasing Investments in District Energy Systems in Cities - a SE4All Energy Efficiency Accelerator	GEF-6	Yes	No

GEF ID	Title	GEF period	Categorized by intervention model	Performance rated in APR 2015
9329	Scaling up the SE4ALL Building Efficiency Accelerator (BEA)	GEF-6	Yes	No
9337	Global Project to leapfrog markets to energy efficient lighting, appliances and equipment	GEF-6	No	No
9340	Food-IAP: Sustainable Land and Water Management Project, Second Additional Financing	GEF-6	No	No
9342	Climate Smart Urban Development Challenge	GEF-6	No	No
9354	Public Lighting Energy Efficiency Program: Public lighting replacement of low-efficiency VSAP bulbs with high-efficiency LEDs in Colombia	GEF-6	No	No
9355	Outer Island Renewable Energy Project	GEF-6	No	No
9357	Strengthening the Environmentally-sound Management and Final Disposal of PCBs in Paraguay	GEF-6	No	No
9370	The Meloy Fund: A Fund for Sustainable Small-scale Fisheries in SE Asia	GEF-6	Yes	No
9379	Application of Green Chemistry in Vietnam to Support Green Growth and Reduction in the use and Release of POPs/harmful Chemicals	GEF-6	Yes	No
9382	Shepherding Biodiversity Back into South Africa's Productive Landscapes	GEF-6	No	No
9393	Project of Hybridization of Diesel Engines of Multifunctional Platforms with Solar Systems	GEF-6	No	No
9480	Towards a Sustainable and Efficient Urban Mobility System in Uruguay	GEF-6	No	No
9485	Programme for Cleantech Innovation and Green Jobs in Morocco	GEF-6	No	No
9492	Leapfrogging South Africa's Markets to High Efficiency LED Lighting and High Efficiency Distribution Transformers	GEF-6	No	No
9493	Advancing Indonesia's Lighting Market to High Efficient Technologies (ADLIGHT)	GEF-6	No	No
9496	Leapfrogging Chilean's Markets to more Efficient Refrigerator and Freezers	GEF-6	No	No
9498	Leapfrogging Tunisia's Lighting Market to High Efficiency Technologies	GEF-6	No	No
9499	Leapfrogging Myanmar's Market to High Efficiency Lighting and Appliances	GEF-6	No	No
9563	Third South West Indian Ocean Fisheries Governance and Shared Growth Project (SWIOFish3)	GEF-6	No	No
9567	Renewable Energy for the City of Marrakech's Bus Rapid Transit System	GEF-6	No	No
9719	Piloting Innovative Investments for Sustainable Landscapes	GEF-6	No	No

Annex C: Survey and interview respondents

C.1 Private sector

Name	Position	Organization	Survey	Interview
Asset managers				
Kai Buntrock	CEO	Stichting ReNew	✓	
Gheeta Tharmaratnam	Director	The Abraaj Group	✓	
David Brand	CEO	New Forests Pty Limited	✓	✓
Markus van den Burg	Managing Director	Conning Asset Management Limited	✓	✓
Commercial banks				
Fabian Huwyler	Vice President Sustainability Affairs	Credit Suisse	✓	✓
Joop Hessels	Executive Director, Head of Green Bonds	ABN AMRO	✓	
Alain Cracau	Director Sustainable Business Development	Rabobank	✓	
Abyd Karmali	Managing Director Climate Finance	Bank of America Merrill Lynch	✓	
Bruce Schlein	Director Alternative Energy Finance	Citi	✓	
Development finance institutions				
Xavier Echasseriau	Senior Investment Officer	Proparco	✓	
Elvira Eurlings	Director Energy	Netherlands Development Finance Company (FMO)	✓	
Ritu Kumar	Director Environment & Social Responsibility	CDC	✓	✓
Christopher Cosack	VP Climate Protection Projects	DEG	✓	✓
Institutional investors				
Orsalia Kalantzopoulos	CEO	Europe Reinsurance Ltd	✓	
Silva Dezelan	Senior Sustainability Manager	RobecoSAM	✓	✓
Patrick Coady	Senior Director	Seale and Associates	✓	✓
Companies				
Clay Nesler	VP Global Energy and Sustainability	Johnson Controls	✓	✓

Name	Position	Organization	Survey	Interview
Elisa Prieto Casana	CEO Office and Strategy Director	Acciona Energia	✓	
David Stevens	CEO	AMF Guarantee Holdings	✓	
Steve Kukoda	VP Membership, Funding and Partnerships	International Copper Association	✓	✓
Dr Vidal Garza	Founding Director	FEMSA	✓	
Martine Provost	Executive Director	Global Sustainable Electricity Partnership	✓	
Thomas K. Dreessen	CEO	EPS Capital Corporation	✓	
Tracy Austin	GM Corporate Communications	Mitsubishi Corporation	✓	
Jeff Seabright	Chief Sustainability Officer	Unilever	✓	
Harry Verhaar	Senior Director Energy and Climate Change	Philips Lighting	✓	
Network organizations/advisers				
Marco van der Linden	Senior Carbon Finance Specialist	Forest Carbon Partnership Facility	✓	
Johnny Brom	Director Innovative Finance	IDH	✓	
Manuel Adamini	Director, Advisory Services	Climate Bonds Initiative	✓	
Robert Youngman	ENV Climate Change Division	OECD	✓	
Guido Schmidt-Traub	Executive Director	SDSN	✓	✓
Jessica Brown	Executive Director Climate Finance	Climate Policy Initiative		✓
Weihui Lily Dai	Research Analyst	Climate Bonds Initiative		✓
Renat Heuberger	CEO	South Pole Group		✓
Darius Nassiry	Senior Research Associate	Climate Bonds Initiative		✓

C.2 GEF

Name	Position	Organization	Survey	Interview
GEF Secretariat				
Naoko Ishii	CEO and Chairperson	GEF		✓
David Rodgers	Senior Climate Change Specialist	GEF	✓	✓
Jean-Marc Sinnassamy	Senior Environmental Specialist	GEF	✓	✓
Roland Sundstrom	Senior Policy Officer	GEF	✓	
Dustin Schinn	Climate Change Analyst	GEF	✓	
Focal points				
Senad Oprasic	Chief Environmental Officer	Government of Bosnia & Herzegovina	✓	
Anyaa Vohiri	Executive Director	Environmental Protection Agency Liberia	✓	
Yousef Muayad Yousif		Ministry of Environment	✓	
Pellumb		Ministry of Environment Albania	✓	

Name	Position	Organization	Survey	Interview
Abdirizak Mohamud	Senior Deputy of Environmental Health	Government of Somalia	✓	
Jose Antonio Gonzalez	Director, International Cooperation	Government of Peru	✓	
Issa Fahiri Kone	Specialist Forestry	Ministry of Environment Mali	✓	
Ilir Morina	CEO	Environmental Protection Agency Kosovo	✓	
Ndey Bakurin	Executive Director	Environmental Protection Agency Gambia	✓	
Diann Black-Layne	Chief Environment Officer	Government of Antigua and Barbuda	✓	
Vesna Indova Tochko	Head of Unit Department	Government of Macedonia	✓	
Shamiso Nandi Najira	Principal Environmental Officer	Government of Malawi	✓	
Abdul Bakarr Salim		Environmental Agency Sierra Leone	✓	
Nomsa T. Zondi		The Development Bank of South Africa	✓	
Inga Podoroghin	International Cooperation Unit	Ministry of Environment, Moldova	✓	
Do Nam Thang	Deputy Director General	Ministry of Natural Resources Vietnam	✓	
Agnes Yobterik	Principal Secretary	Ministry of Environment, Kenya	✓	
Amos Tanko Ibrahim		Ministry of Environment, Nigeria	✓	
Merete Villum Pedersen	Chief Technical Advisor	Ministry of Foreign Affairs, Denmark	✓	✓
Implementing Agencies				
Estibalitz Morras	Programme Officer	UNDP	✓	
Orissa Samaroo	GEF Coordination	Conservation International	✓	✓
Karin Shepardson	Program Manager	World Bank	✓	
Brennan van Dyke	Regional Officer	UNEP	✓	
Jeffrey Griffin	Senior Coordinator GEF	Food and Agriculture Organization of the United Nations	✓	
Juergen Hierold	GEF Coordinator	United Nations Industrial Development Organization	✓	
Nessim Ahmad	Deputy Director General	Asian Development Bank	✓	

C.3 Climate finance funds

Name	Position	Organization	Survey	Interview
Jiwoo Choi	Head of Private Sector Facility	Green Climate Fund		✓
Tiara Letourneau	Private Sector Development Strategist	Green Climate Fund		✓
Christopher Head	Private Sector Specialist	Climate Investment Funds		✓

Annex D: Role of semipublic development and environmental finance institutions

Successful financing and development of private sector projects addressing environmental issues require the involvement of different public and private sector actors. Figure D.1 provides a simplified mapping of the key actors and flows of financial and nonfinancial inputs and outputs.

D.1 Actors

As shown in the figure, the four key types of actors are private sector companies, governments, capital providers, and financial intermediaries.¹ Each has an important role in the environmental finance ecosystem. In addition, there is a specific key role for (semi)public development and environmental finance institutions. They are critical players in the flow of finance to developing countries for environmental finance activities.

MAIN ACTORS

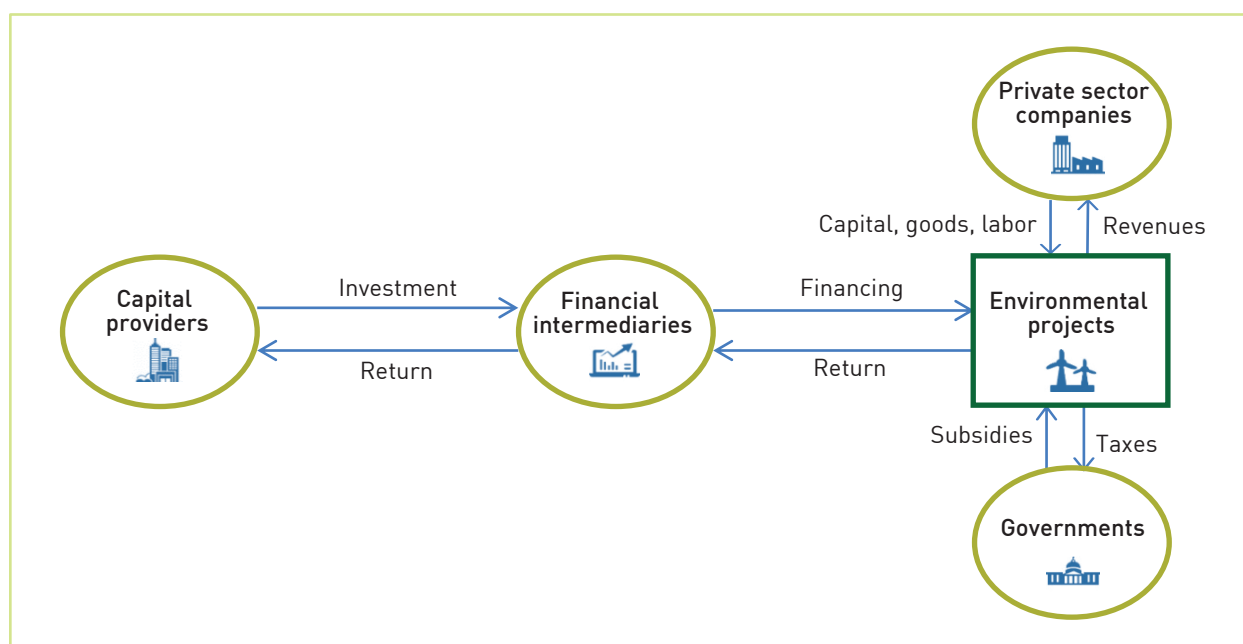
- **Private sector companies** are usually the initiators of projects or activities that address environmental issues. These companies may vary from large corporations and

infrastructure project developers to SMEs or even innovative individual entrepreneurs. These companies generate the ideas, technical expertise, capital goods, and labor for the project. In return, the project generates revenues through which the company can acquire goods, pay salaries, and generate profits.

- **Capital providers** are key actors in the financing of environmental projects. The initial source of private finance is the savings of individuals and corporations. These savings are entrusted to capital providers, which include pension funds, insurance companies, commercial trusts, endowment funds, and high net worth individuals. The mandate and primary motive for capital providers is to pool funds and achieve a risk-adjusted return for the providers of the funds (the fiduciary duty to corporate or household savers). Co-benefits such as sustainable development outcomes may be explicitly or implicitly included as related motives or filters for investment.
- **Financial intermediaries** may be used by capital providers as middlemen that link capital to investment opportunities, such as environmental projects. Primary examples of financial intermediaries include commercial banks, investment banks, investment management firms, and private equity firms. Their main function is to appraise the risk and return of investment opportunities, and determine the

¹ Note that these four types of actors are not necessarily mutually exclusive. Private sector companies and governments may also invest in projects and act as capital providers, while investment banks or pension funds can take up the role of both capital provider and financial intermediary.

FIGURE D.1 Structure and main actors in private sector environmental projects



NOTE: This figure presents a simplified, linear, and nonexhaustive mapping of the core actors involved in the financing and development chain of environmental projects. It does not take into account the original source of finance (savings of individuals and corporations) nor the role of enabling actors or platforms such as industry associations, (sustainability) rating agencies, civil society organizations, etc.

financial instruments most suited to the opportunity. This appraisal process increasingly includes a focus on environmental risks and opportunities, while environmentally focused financial instruments such as green loans, climate bonds, or impact investments are on the rise.

- **Governments** are the key actors providing the location (on land or at sea) for a project and determining the operating environment and “rules of the game” through policy and regulation. Governments may also play a direct financing role by providing subsidies to a project, or an indirect financing role through subsidized policies or tax incentives. In return, governments receive tax payments from the projects through companies.

(SEMI)PUBLIC ENVIRONMENTAL FINANCE ACTORS

- **Multilateral organizations** include international environmental finance mechanisms and funds that have been created by multiple government donors to channel public funds from developed countries to relevant projects in developing countries. The two prime examples are the GEF and the Green Climate Fund, established in 2010. These international mechanisms often cooperate with multilateral development banks such as the World Bank, the Asian Development Bank, the European Investment Bank (EIB), the African Development Bank, and the Inter-American Development Bank. These MDBs provide funds using their own capital or on behalf of multiple government donors. MDBs also have their own dedicated climate funds. Examples are the

World Bank–managed Clean Technology Fund and Strategic Climate Fund, or the European Investment Bank–managed Global Energy Efficiency and Renewable Energy Fund.

- **Bilateral organizations** include bilateral development finance institutions and dedicated environmental finance funds that each provide finance bilaterally, typically from one developed country to multiple developing countries. It is estimated that bilateral sources and intermediaries account for the largest share of public finance flowing from developed to developing countries for environmental finance purposes. Examples of bilateral development banks include the Netherlands Development Finance Company (FMO), Germany’s DEG, CDC Group, and Proparco; examples of dedicated environmental finance funds include Germany’s International Climate Initiative, the UK’s International Climate Fund, and Norway’s International Forest Climate Initiative.
- **Domestic organizations** include national development banks, government agencies, and nationally sponsored climate funds. These institutions are playing an increasingly critical role as intermediaries and providers of environmental finance within their respective countries. This is particularly the case in emerging markets such as Brazil, China, and India. The Brazilian Development Bank (BNDES) is currently one of the world’s largest development banks and manages the Amazon Fund, a climate fund of over \$1 billion.

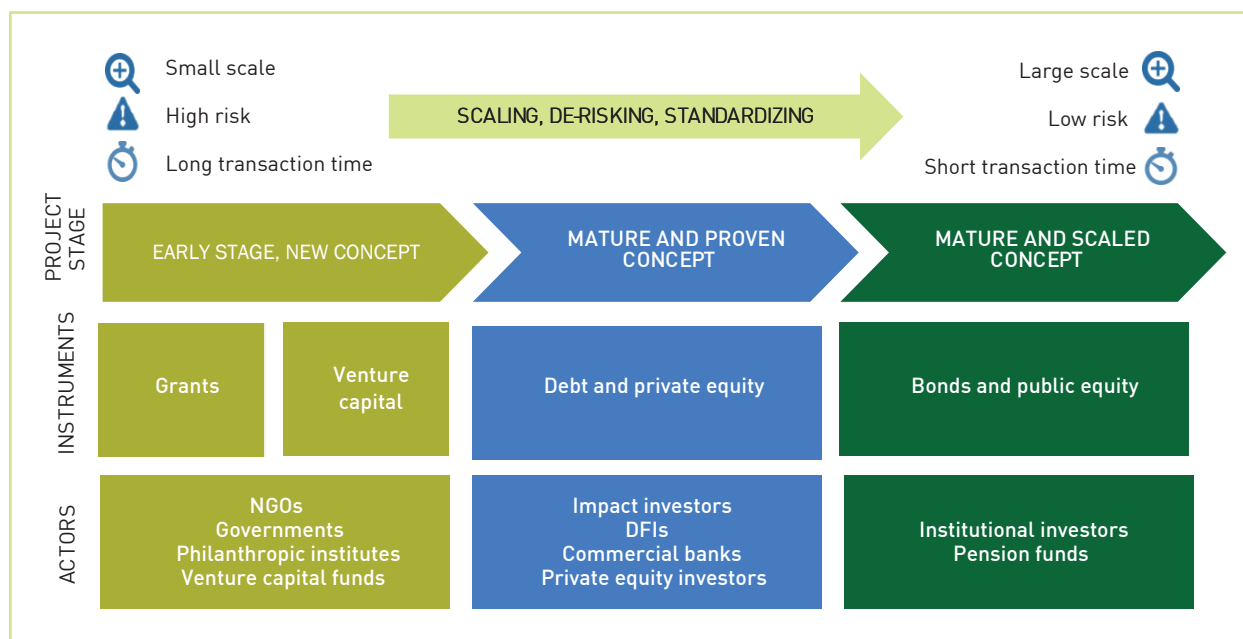
D.2 Role in the market

(Semi)public development and environmental finance institutions execute their dual role of directly financing and leveraging private sector financing through several financial instruments and advisory services. Through these financing

and advisory services, these institutions can help attract foreign and domestic private sector co-investment in developing countries by taking risks that the private sector is not (yet) willing to bear. These financial activities can be simplified into two main directions:

- **Financing private sector projects directly through the main financial instruments outlined in figure D.2.** The main added value of direct financing is that these mechanisms generally have a higher risk appetite than commercial financiers. This means that they can go to countries and/or markets where commercial financiers do not yet go, support innovative projects or local financial intermediaries with a limited track record and/or collateral, and are able to charge lower interest rates if necessary. Whereas the traditional focus is mostly on debt and private equity, public finance mechanisms may also provide grants and venture capital, or nonfinancial support such as technical assistance.
- **Mobilizing additional private sector investment in projects through strategic use of finance and grant funding.** In the past few years, a new model has gained traction under the phrase “blended finance.” The main form of blended finance is a public-private partnership, which is often initiated by environmental finance institutions. PPPs concern partnerships where services and infrastructure that traditionally are public sector responsibilities are provided by the private sector under an agreed funding model. In the environmental finance field, this may entail the development of wind energy or forest conservation projects. Additional private sector capital can be mobilized through the effective use of de-risking instruments such as loan guarantees.

FIGURE D2 Types of project and financing



Nonfinancial advisory services include the following:

- **Supporting domestic regulatory frameworks that create attractive private sector investment conditions.** Environmental finance mechanisms can undertake activities that directly support improvements to the local investment climate in emerging and frontier markets. For example, engagement with governments on procurement processes and strategic investment plans can help align incentives with capital providers and drive new sources of capital flows.
- **Sharing local market knowledge and experience.** Environmental finance mechanisms can utilize their local expertise and presence to help bridge knowledge gaps of investors and banks necessary for a successful transaction. Leveraging their local partners and networks can facilitate the sourcing of deals, due diligence, and deal structuring, creating a pipeline

of investable opportunities and introducing global investors to new markets.

D.3 Projects and instruments

Environmental projects vary in size, maturity, and extent to which a concept is proven as an investment opportunity. For each type of environmental project, different financial instruments are suited, which are offered by different types of institutions. Figure D.2 provides a basic mapping of the relation between project, financial instruments, and capital-providing institutions. As projects progress from a new concept to a mature concept, the transaction time shortens, the scale increases, and the risk of the investment opportunity is lowered. Ideally, environmental projects gradually move toward standardized, commercialized, and scaled forms of finance.

MATURITY STAGES AND MATCHING FINANCIAL PRODUCTS

Support for innovative early stage and new concepts is key, as these projects provide new pathways to help tackle environmental problems. Examples are the development of concrete environmental solutions such as bioplastic applications or smog vacuum cleaners. Given their smaller scale, unproven nature, and—hence—higher risk, these projects often initially require grants for research and development, feasibility studies, start-up, and initial development stages. Grants are mostly offered by NGOs, governments, or philanthropic institutions. In some cases, venture capital may also be used, offered by specialized venture capital funds such as Khosla Ventures or impact investors such as the EcoEnterprises Fund.

More mature concepts that are known and tested are eligible to be financed by debt and private equity instruments offered by commercial financial institutions. Smaller-scale examples include loans for the greening of residential or commercial real estate; examples on a larger scale include offshore wind farms, solar photovoltaic systems, solar thermal energy, and biomass. These financial instruments are increasingly offered by major global financial institutions such as Bank of America Merrill Lynch, Deutsche Bank, and Goldman Sachs, which have designed specific product lines and reserved specific capital amounts for green financing. Examples of private equity investors include Hudson Clean Energy Partners in renewables and the Moringa Fund in agroforestry. In this category, development finance institutions often play an important role in providing financing to companies and projects in developing countries that commercial banks are not yet willing to finance.

The largest amounts of financing are available for mature, proven, scaled, and/or bundled concepts. These projects can have access to the potentially largest source of capital available—that of institutional investors such as pension funds and insurance companies looking for large-size, low-risk investments. These institutional investors allocate capital to green infrastructure investment vehicles, or invest in publicly traded stocks of multinational companies with an environmental focus, such as Dong Energy or Tesla Motors. The main challenge is to unlock more of this capital toward environmental projects and companies. One new development is the concept of climate or green bonds, which are used to finance—or refinance—projects needed to address climate or environmental challenges (see below for more on green bonds).

The GEF and its stakeholders have long acknowledged the important role the GEF can play in stimulating the environmental finance market, either by supporting new initiatives to blossom or existing ones to scale up. The remainder of this annex analyzes the strengths and weaknesses of GEF private sector engagement in the environmental finance arena and its comparative advantages in this space.

INVESTMENT FUNDS

Investment funds with a focus on environmental companies can be an effective mechanism to indirectly provide finance to new environmental technology or innovative business models. Compared to bank financing, these funds are often able to take more risk, and target younger and smaller companies with limited track records. In the case of specialized environment funds (see box D.1 for examples), the fund team often consists of specialists combining financial with environmental expertise.

BOX D.1 Examples of specialized investment funds

EcoEnterprises. This fund manager focuses on investments in small start-up companies in Latin America that can achieve scale. It targets companies active in unconventional sectors often neglected by traditional financiers: sustainable agriculture, aquaculture, ecotourism, certified forestry, and wild-harvested products.

Aquaspark. This global investment fund makes investments in sustainable aquaculture businesses that help address the planet's health and food security issues. It invests in SMEs working toward the production of safe, accessible aquatic life, such as fish, shellfish, and plants. It aims to contribute to sustainable solutions that reverse the overfishing trends threatening the world's waters.

New Forests. This real estate investment firm specializes in investments in sustainable forestry, land management, timber processing, and conservation, primarily in South East Asia, North America, and Oceania. In 2013, the firm launched its first fund in Asia—the Tropical Asia Forest Fund—which is dedicated to sustainable forestry and manages \$170 million of committed capital from pension funds and development banks. The firm focuses on ensuring landscapes encompass both production and conservation values.

Specialist investment funds operate in innovative and thus often risky fields, which makes it difficult for these funds to get the first investor on board. Testing and demonstration effects are important to improve investor perception of an innovative project's investment opportunity. The first investor, or group of investors, signals confidence in the fund manager and can be a decisive factor in others following suit. Given the GEF's experiences with PPPs focused on the use of nongrant instruments and the provision of technical assistance,

the GEF can effectively support specialized investment funds through the following means:

- **Cornerstone investment.** The GEF is well placed to take up a cornerstone role, as its risk appetite allows it to commit this first capital. GEF investment will serve as a seal of approval for the fund and help raise capital from other investors.
- **Co-investment.** Companies targeted by environmental investment funds can be interesting opportunities for the GEF if it wants to consider direct equity investments in innovative companies. As the GEF has little capacity to source these kinds of investment opportunities, it can effectively leverage the fund manager's capacity to do this work. If the GEF is interested in these companies, it can co-invest alongside the fund with relatively low effort.
- **Grants for technical assistance.** In addition to equity investments, the GEF may consider providing grants for technical assistance to companies invested in by these funds. This technical assistance can be used for feasibility studies or to arrange funding for hardware required to apply new innovative technologies.

RISK-SHARING INSTRUMENTS

Investments in innovative companies, projects, or funds present risks for private investors. Projects may entail specific risks associated with the use of new technologies, untested business propositions, and uncertain demand; or general risks such as foreign exchange, political, or regulatory risks. Environmental projects often have longer-term investment horizons, which may further complicate potential deals. The risks, perceived or actual, are even larger in investments in developing countries. These considerations may hold

BOX D.2 Examples of risk-sharing mechanisms

Small Investment Program (SIP). The SIP is an example of a more generic risk-sharing program. Launched by the World Bank Group's Multilateral Investment Guarantee Agency in 2005, the SIP aims to facilitate foreign direct investment into SMEs in developing countries. It offers investors investing in SMEs a standardized package of risk coverage, including currency inconvertibility and transfer restriction, expropriation, and war and civil disturbance.

Geothermal Financing and Risk Transfer Facility. This facility developed by IDB is an example of a more specific risk-sharing instrument. It aims to scale up private investment in geothermal power generation projects in Mexico. The facility offers risk mitigation in the early stages of exploration and test drilling, with financing solutions adapted to different project phases of geothermal projects. The focus is on private and private-led PPP projects.

USAID loan guarantee to Althelia. An example of risk-sharing support to a specialist fund is the United States Agency for International Development's (USAID's) loan guarantee to the Althelia Climate Fund, an investment fund focusing on sustainable land use and payment for ecosystem services (including forest carbon, or REDD+). In 2015, USAID agreed on a \$133.8 million loan guarantee. Under the deal, USAID guarantees 50 percent of loans that Althelia makes to REDD project developers. With carbon prices dropping on the voluntary markets, the guarantee was intended to reassure private investors entering a new investment sector.

potential investors back from deciding to invest in these companies, projects, or funds.

Risk-sharing instruments for investments such as guarantees, risk-sharing facilities, and insurance products can be attractive and relatively inexpensive ways for the public sector to mobilize private investment in environmental companies, projects, or funds (see box D.2 for examples).

There is increasing acknowledgment among governments, environmental finance mechanisms, and other public financial institutions about the potential of risk-sharing tools to leverage private investment. Particularly in investment areas that are fundamentally cost-effective and profitable (e.g., energy efficiency), more efficient allocation of risks can catalyze significant private capital flows without necessarily disrupting any private sector finance construction.

Through its PPP programs, submitted under the GEF-5 replenishment cycle, the GEF aimed to reduce risk through the provision of incremental financing. For example, in the IDB Climate-Smart Agriculture Fund, the GEF played a crucial role in reducing risks by providing guarantees for risks associated with the long payback period for forestry projects in Paraguay. Its experience in reducing risk through the provision of both financial and advisory services mean the GEF is well positioned to step up its support through two key risk-sharing measures.

- **Risk-sharing instruments.** The GEF can mitigate potential high risk perceptions and/or lack of confidence in the financial viability of environmental projects or innovative investment funds through risk-sharing instruments. This will catalyze additional financing by private investors in these projects or funds. The GEF could therefore consider stepping up its support through risk-sharing instruments in cases

of projects where these risk-sharing measures can make a difference.

- **Due diligence.** Although technically not considered part of risk-sharing instruments, risk can also be mitigated by carrying out due diligence for innovative projects or funds. Many long-term investors lack the resources to conduct the intensive and technical due diligence required on, e.g., a renewable energy project in Africa. By executing due diligence and sharing the findings, the GEF can pave the way for investors to step in. This requires the GEF to streamline its project appraisal processes more along the lines of private sector due diligence, and switching to a more services-oriented organization.

GREEN BONDS

In recent years, green bonds and climate bonds (collectively referred to here as green bonds) have become increasingly significant instruments to mobilize finance for projects with environmental benefits (see box D.3 for examples). Green bonds facilitate investment for new and existing projects by aggregating and structuring debt financing in a way that enables even small-scale investments to raise dedicated funding from debt capital markets. For investors, green bond markets offer a stable, rated, and liquid investment with a long duration. For issuers, green bonds are a way to tap the huge pool of patient private capital managed by global institutional fixed-income investors. For smaller project developers, green bonds can bridge the gap between them and debt capital providers with large minimum investment requirements.

The lack of a globally harmonized definition of this type of bond makes it difficult to quantify the volume and development of the market. However, existing data suggest that its use has

BOX D.3 Examples of green bonds

EIB Climate Awareness Bond. The EIB issued its first Climate Awareness Bond in 2007. With this issuance, it pioneered the ring-fencing of proceeds in a dedicated liquidity portfolio within the EIB. The funds are earmarked to match disbursements to EIB lending projects contributing to climate action. The EIB is the largest issuer to date of green bonds, with €10 billion raised across 10 currencies. Over the years, Climate Awareness Bond proceeds have been allocated to 55 projects in 19 countries across the globe.

ABN AMRO Green Bonds. In 2015 ABN AMRO issued a €500 million (\$530 million) green bond. It was the first commercial European bank to issue a green bond of this size. The proceeds are used exclusively to finance sustainable real estate: mortgages for energy-efficient homes and sustainable commercial real estate. The bond was externally assessed by Oekom, a sustainability rating agency, and certified by the Climate Bonds Initiative. The bank produces reports that give investors information on how and where their investments are making an impact. As the demand for the bond was oversubscribed two times, a second €500 million green bond was issued in 2016.

Shanghai Pudong Development Bank green bonds. The Shanghai Pudong Development Bank has raised \$5 billion in two deals this year. The bank's \$3.04 billion China-focused issuance ranks as the world's largest green bond deal to date. It is anticipated that Chinese green bonds may become more attractive than traditional financing options for environmentally friendly initiatives, particularly as the People's Bank of China is considering offering interest rate subsidies for green bond issuers to keep borrowing costs low and attract investors in a growing market.

been growing at a strong pace. According to the Climate Bonds Initiative, the size of the green bonds market reached \$118 billion in 2016. Only a small portion of these bonds have actually been labeled as green or climate bonds by their issuers: the Climate Bonds Initiative estimates that a further \$576 billion in outstanding bonds can be labeled climate aligned (but not officially labeled as green). Moreover, 2016 was notable as China overtook the United States as the largest issuer of green bonds.

The green bond market has grown immensely in the past year, and awareness among financial institutions is growing. To illustrate, a group of financial institutions were among the founders of the Green Bond Principles, which are voluntary guidelines that clarify the process for issuance. For the market to continue to develop successfully, a global definition of what a green bond is needs to be developed. A threat to market development is that many environmental, social and corporate governance (ESG) –screened investments are being relabeled as green bonds with a risk of being perceived as green washing. In China, key factors for the success of the past year were encouraging policy and regulatory developments, such as the launch of the green bond guidelines by the People’s Bank of China.

Continued development of green bonds and the market will require involvement of many different actors. The GEF, with its established network and experience in providing advisory services, is well positioned to explore how it could best support governments and different market players in working on measures to further develop the green bond market. Examples of how the GEF could support different actors follow.

- **Standardization.** The GEF could support the development of more standardization on definitions and disclosure to enhance credibility

and address reputational risk—such as of the Green Bond Principles, voluntary guidelines developed by several major financial institutions.

- **Validation and rating.** The GEF could support the development of criteria for independent validation and rating. Such criteria are particularly important as “confidence builders” in markets where green technologies are less well known.
- **Regulatory support.** The GEF could work with governments in developing regulatory improvements for green bond market development, including by removing unintended barriers to institutional investment in green bonds and other instruments.

D.4 Conservation finance: upcoming asset class

An innovative and upcoming asset class to which the above-mentioned financial instruments can be effectively applied is conservation finance. Conservation finance is a mechanism through which a financial investment into an ecosystem can be made, whereby it intends to generate profit and aims to conserve the values of the ecosystem in the long term.

Players in the conservation finance landscape include, among others, NGOs, philanthropists, public entities, development banks, and private sector financial actors. Currently, the source of the financial flows in this asset class is predominantly public sector financing—in particular, domestic budget allocation, agricultural subsidy reform, and overseas development aid. The GEF is also active in this field, committing funds to protecting the international waters through, e.g., the reduction of ocean pollution. The private sector has increasingly become involved in

conservation finance, with private capital commitments growing by 62 percent in two years.² This is partly due to the development of conservation finance mechanisms such as carbon finance and nutrient trading, which create incentives for the private sector and to harness private capital (Credit Suisse Group AG, World Wildlife Fund, McKinsey & Company 2014).

Although delineating what financial flows constitute as conservation finance is difficult, the recent Ecosystem Marketplace report (Hamrick 2016) identifies three core groups in which investments are made: sustainable food and fiber production, habitat conservation, and water quality and quantity protection. Of these three groups, sustainable food and fiber production continued to attract the bulk of the capital—approximately four times the amount committed for habitat conservation and water quality and quantity protection combined. The private capital committed was predominantly in developed countries, with North America and

Oceania receiving about \$2.7 billion (52 percent of total committed).

The types of instruments being used in this asset class range from real assets to environmental credits. The finance solutions discussed earlier in this annex, to which the financial and advisory services of (semi)public financial institutions can effectively be leveraged, are also found in conservation finance: specialized investment funds (e.g., Ecosystem Investment Partners), risk reduction mechanisms (e.g., the No Net Loss policy in the U.S. Clean Water Act), and green bonds (e.g., the District of Columbia Water and Sewer Authority's \$350 million taxable bond).

There has been growth in private sector involvement in conservation finance; yet despite an unmet demand for funding of projects, there remained \$3.1 billion of private capital uncommitted at the end of 2015. Within this asset class, opportunities thus exist for both public and private actors to further develop financial mechanisms and instruments. It is key that private capital be effectively catalyzed and directed to ensure equal distribution across geographies and environmental issues.

² Figures come from the recent Ecosystem Marketplace report (Hamrick 2016), which is based on surveys sent to investors, investment funds, project developers, banks, and other financial entities. It thus does not provide a complete overview of all global conservation finance flows.

Annex E: Methodology for mapping environmental finance actors

To provide an overview of the (semi) public environmental finance field in which the GEF operates, a sample of 14 multilateral, bilateral, and national funds and mechanisms were mapped (figure 2.8). The data used for the mapping were sourced directly from the websites of the funds and mechanisms (see table E.1 for links). The methodology in assessing the funds and mechanisms was to imitate the private sector's approach in seeking out opportunities for engagement in the environmental finance field.

The following characteristics and information of the funds and mechanisms were extracted from the source data:

- Type of fund or mechanism: national, bilateral or multilateral
- Fund size: in million U.S. dollars
- Thematic and instrumental focus
 - Thematic focus includes geographic, environmental issue, and sector focus
 - Instrumental focus includes services (in addition to financing) and type of financial products offered
- Accessibility to the private sector
 - Communication of private sector engagement
 - Communication of project cycle information
 - Level of engagement with the private sector

TABLE E.1 Web links for semipublic environmental finance actors mapped

Name	Source
National actors	
Amazon Fund	www.amazonfund.gov.br
Brazilian National Fund on Climate Change	www.bndes.gov.br
Rwanda National Climate Fund	www.fonerwa.org
Bilateral actors	
International Climate Fund	www.gov.uk/government/publications/international-climate-fund/international-climate-fund
Global Climate Partnership Fund	www.gcpf.lu
International Climate Initiative	www.international-climate-initiative.com
International Forest Climate Initiative	www.regjeringen.no/en/topics/climate-and-environment/climate/climate-and-forest-initiative
Multilateral actors	
Adaptation Fund	www.adaptation-fund.org/
Clean Technology Fund	www-cif.climateinvestmentfunds.org/fund/clean-technology-fund
Strategic Climate Fund	www-cif.climateinvestmentfunds.org/fund/strategic-climate-fund
Africa Climate Change Fund	www.afdb.org/en/topics-and-sectors/initiatives-partnerships/africa-climate-change-fund/
Green Climate Fund	www.greenclimate.fund
Global Environmental Facility	www.thegef.org
Global Energy Efficiency and Renewable Energy Fund	www.geeref.com

Annex F: Comparison of climate finance funds

Parameter	GEF	CIF: CTF	CIF: SCF	GCF
Funding	\$4.4 billion in GEF-6, of which \$1.2 billion was allocated for climate change (GEF 2014f)	\$5.8 billion fund, of which \$3.8 billion was deployed (November 2016)	Three funds totaling \$2.8 billion: \$1.5 billion with indicative allocation to projects (as of late 2016) - FIP: \$758 million in fund, \$603 million approved - SREP: \$839 million in fund, \$822 million allocated - PPCR: \$1.2 billion in fund, \$121 million allocated	\$10.3 billion pledged; \$2.2 billion invested since 2015 (as of April 2017)
Accredited entities/ implementing agencies	18 Implementing Agencies: international development institutions, MDBs, some others	6 implementing agencies (MDBs)	6 implementing agencies (MDBs)	48 accredited entities: MDBs, development institutions, NGOs, national and international financial institutions
Programmatic focus	GEF-4 Earth Fund and GEF-5 PPPs; IAPs launched in GEF-6; focal areas and various intervention models long-standing practice	Increasing focus on leveraging private investment and neglected clean energy and transportation technologies in CTF 2.0	Mostly national investment plans (largely not applicable); private sector carve-out activities under development	Roughly 50% of projects (all non-sovereign government implementers) implemented through PSF
Thematic/ geographic focus	STAR allocation system; many nonclimate programs across multilateral environmental agreements; programmatic carve-outs for nongrant projects in GEF-5 and GEF-6	Climate change and clean energy only; national investment plans; middle-income countries	Climate change only; adaptation (PPCR), forests (FIP), and LDC clean energy (SREP) funding windows	Climate change only; broad geographic focus; 50% carve-out for adaptation, of which 50% for most vulnerable countries, including LDCs, SIDS, and African states

Parameter	GEF	CIF: CTF	CIF: SCF	GCF
Size and focus of private sector programs	Mainstreaming, nongrant, and IAPs; funding (CPI 2016): - GEF-4: \$56 million set aside to Earth Fund - GEF-5: \$80 million set aside across all focal areas, of which \$70 million committed - GEF-6: \$110 million across all focal areas (access to both public and private)	Private sector carve-outs established in 2012: \$508.5 million (Phase I: \$150 million, Phase II: \$358 million), of which \$466.5 million endorsed, \$341.6 million approved (CPI 2016) Project focus includes geothermal power, minigrids, mezzanine finance, energy efficiency, solar photovoltaic power, and early stage renewable energy	Private sector carve-outs since 2012 in FIP, PPCR, and SREP; not yet very successful to date; no sectoral focus of SCF carve-outs - FIP set-aside: \$56 million - PPCR set-aside: \$70 million - SREP set-aside: \$93 million (Phase I: \$60 million, Phase II: \$30 million) (CPI 2016)	No sectoral focus; two requests for proposal establishing thematic focus: Pilot Program for Mobilizing Funds (\$500 million) and Pilot Micro, Small, and Medium-Sized Enterprise Program (\$200 million)
Level and type of concessional instruments	Mostly grants, aside from private sector set-aside programs	Mostly nongrant; Some market-rate loans	Mix of grants and loans, depending on fund	Primarily nongrant, but not mandated as such; some market-rate investments
Investment mechanisms and percentage distribution of concessional instruments used (CPI 2016)	Various (debt, equity, investment guarantees, others) In GEF-5 climate change focal area: nongrant instruments, 12.2%, (debt: 4.7%, equity: 1.0%, risk mitigation: 4.7%, mixed: 1.8%); grant instruments, 87.8%	Primarily debt investment (roughly 80%) Breakdown as of late 2015: grants, 3%; guarantees, 2%; softer-termed concessional loans, 47%; harder-termed concessional loans, 21%; private sector loans, 26%	- FIP: grants, 21%; loans, 79% - PPCR: grants, 67%; loans, 33% - SREP: grants, 21%; loans, 77%; guarantees, 2%; other instruments, 0.4%	GCF portfolio breakdown as of late 2015: guarantees, 12%; equity, 12%; grants, 76%; others under consideration
Risk appetite	High	Moderate	High	Moderate (still in flux)
Investment size ^a	Various, including small and medium	All CTF investments are greater than \$150 million (CIF 2016)	Various, including small and medium (CIF 2016) - FIP: \$30–\$95 million - PPCR: \$10–\$110 million - SREP: \$2–\$50 million	Various, primarily medium and large (greater than \$50 million)
Private sector leveraging	Various (moderate to high), depending on mechanism, intervention approach, and focal area; in GEF-5 and GEF-6, \$300 million leveraged \$4.7 billion from private sector	High: \$2.4 billion expected to leverage \$20 billion	Low	Medium: \$1.3 billion expected to leverage \$4 billion

Parameter	GEF	CIF: CTF	CIF: SCF	GCF
Niches	Non-climate change specific; frontier markets; small scale, high risk, and innovative; conservation finance; cross-cutting programs addressing environmental drivers; capacity building, multistakeholder platforms, and policy enabling environments	Country-specific programs; bringing clean energy technology investment to scale in new markets; pairing donor funds with MDB investment and market-driven private investment funds and transactions; large debt, equity funds, green bonds	Catalyzing clean energy, forests, adaptation investment in LDCs and underdeveloped, precommercial climate change-related markets; capacity building and policy enabling environments	Linking UNFCCC nationally determined contribution commitments to government policies and investments; linking international capital markets with domestic climate institutions; climate finance market development
Mandate from any multilateral environmental agreement	Minamata Convention on Mercury, Stockholm Convention on POPs, Convention on Biological Diversity, United Nations Convention to Combat Desertification, UNFCCC	No	No	UNFCCC

NOTE: FIP = Forest Investment Program; LDC = least developed country; PPCR = Pilot Program for Climate Resilience; SIDS = small island developing states; UNFCCC = United Nations Framework Convention on Climate Change.

a. GEF: full-size projects, over \$2 million; medium-size projects, up to \$2 million; enabling activities, up to \$1 million. GCF: micro projects, under \$10 million; small projects, \$10–\$50 million; medium projects, \$50–250 million; large projects, over \$250 million.

Annex G: Bilateral and regional agencies providing environment-related financing

G.1 Overseas Private Investment Corporation

The Overseas Private Investment Corporation (OPIC) is the bilateral development finance institution of the United States. Interestingly, OPIC's website today makes no mention of its earlier stated policy objective of encouraging the use of renewable resources, though energy remains a focus area. It offers a range of financing products to the private sector in developing countries: debt, funds and structured products, and de-risking instruments such as political risk insurance and guarantees. It cannot take direct equity stakes in projects (but can do so indirectly through debt or other support for private equity funds), and neither does it provide grants nor technical assistance (Christianson, Venugopal, and Patel 2013). In 2016 alone, OPIC committed \$1.4 billion to energy and critical infrastructure projects, including \$55 million for off-grid energy. OPIC's Power Africa project has committed \$1.5 billion in financing and insurance for energy projects in Sub-Saharan Africa between 2013 and 2018.¹

OPIC debt financing is offered on negotiated terms (interest rate consists of a spread over the base cost of funds) and includes various fees; tenors can go up to 30 years. While not explicitly concessional, OPIC financing is made available to

projects that would be unlikely to attract commercial financing on the same terms.

G.2 Global Climate Partnership Fund

The Global Climate Partnership Fund (GCPF) is an interesting structure billed as a public-private partnership, with a tiered shareholding structure that de-risks returns for private sector investors. The German Federal Ministry for the Environment; the UK Department of Business, Energy and Industrial Strategy; and the Danish Ministry of Foreign Affairs hold the junior tranche, or Class C shares, in the waterfall structure. A mezzanine tranche, or Class B shares, is held by the fund manager responsible; the senior tranche, or Class A shares, is held by Oesterreichische Entwicklungsbank AG (OeEB; the Austrian development bank), KfW (the German development bank), the Netherlands Development Finance Company (FMO; the Dutch development bank), and IFC. A German pension fund and a Dutch are private noteholders in the structure. The Class C shares represent the first loss equity of the fund; B shares rank senior to C shares and A shares rank senior to B shares, but all shares rank junior to noteholders. Remuneration of notes and shares is based on six-month LIBOR (London Interbank offered rate) and an agreed spread.

The GCPF invests in renewable energy and energy efficiency in emerging and developing markets globally. It does this directly or via local financial

¹Source: OPIC [website](#).

intermediaries. Financing products include senior and subordinated debt, as well as equity and mezzanine finance.²

G.3 European Investment Bank

Although focused primarily on the European Union (EU), the European Investment Bank is able to offer finance in “associated countries,” which include several developing countries of geopolitical interest to the EU. While lending comprises the bulk of the EIB’s activities, it is also able to provide blended finance and advisory assistance. None of the programs described below have an explicit environmental focus, but are governed by the EU’s commitment to low-carbon and climate-resilient growth and the EIB’s stated goal of committing 25 percent of its lending portfolio to such activities. Programs of relevance to the GEF include the following.

- **InnovFin.** This facility aims to facilitate access to finance for innovative businesses which may not be able to attract conventional finance due to technological complexity, unproven markets, and other barriers. It consists of financing tools such as loans and guarantees, and advisory services, provided directly or through financial intermediaries. As of September 2016, InnovFin had financed over 100 projects and provided over €100 million in financial support for activities in a range of sectors, including risk-sharing facilities with financial

institutions, and energy (11 percent and 13 percent, respectively). By 2020, InnovFin expect to make €24 billion of debt and equity financing available to innovative companies to support €48 billion of final investment.

- **Trust funds.** Grant resources provided by donors such as the European Commission and EU member states are pooled by the EIB and provided directly to beneficiaries or leveraged with financial products from the EIB or other financial institutions. These trust funds can help in financing technical assistance and other advisory services, and fill financing gaps. Currently, the EIB manages four trust funds, all of which have activities in countries that would also be eligible for GEF assistance. Total funding provided or available as of this writing was close to €2 billion.
- **Risk Capital Facility for the Southern Neighbourhood.** This is a €142.5 million facility to provide access to equity and debt financing to SMEs in the Mediterranean region for private sector development. It invests in private equity funds, microfinance institutions, and investment vehicles; and provides technical assistance to financial intermediaries or final beneficiaries.³

²Source: GCPF [website](#).

³Source: EIB [website](#).

Annex H: Convention guidance on private sector engagement

Convention/ GEF focal area	Strategic document/COP decision/other	Guidance
Convention on Biological Diversity (CBD)/ Biodiversity	Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets (CBD 2010)	- By 2020, the private sector and stakeholders from all other sectors to have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits. - Business sector entities, among others, to make available the necessary resources for implementation of the Strategic Plan for Biodiversity 2011–2020. - Forge partnerships with the private sector, among others, to leverage actions at the scale necessary and to ensure mainstreaming of biodiversity across sectors of government, society, and the economy.
	COP 8 Decision VIII/17 Private sector engagement (CBD 2006)	- The following types of tools and mechanisms may be of use in facilitating contributions from business and industry toward implementation of the convention: voluntary or mandatory reporting and performance standards, guidelines, and indexes; certification schemes; biodiversity benchmarks; public-private partnerships; tools for assessing the value of biodiversity and ecosystem services. - Urge national focal points, working with relevant government departments, to communicate the importance of biodiversity to companies operating within the jurisdiction of parties. - Invite businesses and relevant organizations and partnerships to develop and promote the business case for biodiversity.
United Nations Framework Convention on Climate Change (UNFCCC)/ Climate change	Adoption of the Paris Agreement (UNFCCC 2015)	- Uphold and promote regional and international cooperation in order to mobilize stronger and more ambitious climate action by all parties and nonparty stakeholders, including the private sector. - Encourage the coordination of support from, inter alia, private and alternative sources in accordance with relevant decisions by the Conference of the Parties. - Welcome the efforts of all nonparty stakeholders to address and respond to climate change, including those of the private sector. - Incentivize and facilitate participation in the mitigation of greenhouse gas emissions by private entities authorized by a party. - Enhance public and private participation in implementation of nationally determined contributions.

Convention/ GEF focal area	Strategic document/COP decision/other	Guidance
United Nations Framework Convention on Climate Change (UNFCCC)/ Climate change	UNFCCC Nairobi Work Programme Private Sector Initiative (NWP PSI)	NWP PSI aims to catalyze private sector engagement in climate change adaptation efforts. It provides a platform for the private sector to showcase and exchange best practices and experiences. The PSI also presents organizations with the opportunity to develop knowledge on climate change adaptation, build adaptive capacity, and be part of a growing network of organizations taking measures to adapt to the impacts of climate change.
United Nations Convention on Combating Desertification (UNCCD)/ Land degradation	10-year strategic plan and framework to enhance implementation of the convention (2008–2018) (Secretariat of the Convention to Combat Desertification 2007)	Identify innovative sources of finance and financing mechanisms to combat desertification/land degradation and mitigate the effects of drought, including from the private sector and market-based mechanisms, among others (Outcome 5.4).
	UNCCD business engagement strategy (Secretariat of the Convention to Combat Desertification 2015, Annex I)	- Businesses and relevant organizations and partnerships to develop and promote the business case for biodiversity. - Establish an enabling policy environment for business sector engagement. - Identify and engage with the major global business networks that have sustainability agendas open to sustainable land management (SLM) approaches (Global Compact principles, World Business Council for Sustainable Development, World Economic Forum, International Chamber of Commerce) and mainstream SLM targets into these agendas; form partnerships and jointly develop tools that help business to mainstream SLM into the business operations, practices, and policies of network members. - Support the documentation of business-relevant evidence for action and case studies for the Economics of Land Degradation Initiative (for business) or the Offering Sustainable Land-use Options Consortium. - Finance SLM through incentives and market-based funding mechanisms.
Stockholm Convention on Persistent Organic Pollutants (POPs)/ Chemicals and waste	Stockholm Convention text and annexes	- The convention recognizes the important contribution that businesses and industry (e.g., producers, manufacturing sector, waste treatment companies) can make to achieve the reduction and/or elimination of releases of POPs into the environment by offering new and efficient technologies and by making investments for the development of alternatives, etc. - Businesses and industry may make various contributions to the scientific and technical work under the convention, e.g., through provision of information to the POPs Review Committee when a proposal for listing new chemicals to the convention is under consideration. Without the active involvement and engagement of the industry sectors, none of the goals of elimination, reduction, or environmentally sound disposal are likely to be achieved.

Convention/ GEF focal area	Strategic document/COP decision/other	Guidance
Minamata Convention on Mercury/ Chemicals and waste	Minamata Convention on Mercury text and annexes (UNEP 2013)	- Private sector involvement is regarded as one of the resources that the party uses to implement the convention, in accordance with the party's national policies, priorities, plans, and programs. - The financial mechanism shall encourage the provision of resources from other sources, including the private sector, and shall seek to leverage such resources for the activities it supports. - Capacity-building, technical assistance, and technology transfer through partnerships, including partnerships involving the private sector.
Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer/ Chemicals and waste	Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer 10th edition (UNEP 2016)	- Request the Scientific Assessment Panel and the Technology and Economic Assessment Panel to develop a guidance paper on mechanisms to facilitate public-private sector cooperation in the evaluation of the ozone-depletion potential of new chemicals in a manner that satisfies the criteria to be set by the panels (Decision XI/19), and produce a guidance paper on public-private sector partnerships in this assessment (Decision XIII/5). - Prevent illegal trade in ozone-depleting substances and crosscheck trade information, including through private-public partnerships (Decision XIX/12).
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal/ Chemicals and waste	Strategic Framework for the implementation of the Basel Convention for 2012–2021 (Decision BC-10/2)	- The private sector and partnerships, among others, are identified as the options for implementing the Basel Convention. "Industry involvement, including public-private partnerships and the use of economic instruments at the national and international levels" has been identified as one of the four tracks of an integrated approach toward financing the sound management of chemicals and wastes.
	New strategic framework for the implementation of the Basel Convention for 2012–2021 Means of Implementation. (Secretariat of the Basel Convention, 2011)	- To launch or contribute to strategic and operational partnerships and cooperation with public and private stakeholders to leverage the impact of the Basel Convention, and to promote public-private partnerships could be the means of implementation of the Basel Convention. - There are different levels of means of implementation, for instance, industry involvement, including strategic public-private partnerships and the use of economic instruments at national and international levels, and collaboration between governments, the private sector, and international financial institutions to guarantee effective support to industry, business, and education. The latter requires an enabling environment for its development.
	The Basel Convention Partnerships Programme	Public-private partnership provides an effective and open way for stakeholders to meet together to address common areas of concern and identify a program of actions to undertake collectively. Industry, in particular, plays a vital role in partnerships as it possesses the technical skills, know-how, and infrastructure needed for the environmentally sound management of many waste streams, including sound recycling and safe disposal of end-of-life products.

Convention/ GEF focal area	Strategic document/COP decision/other	Guidance
Multilateral agreements on international waters and transboundary water systems/ International waters		The International Convention for the Control and Management of Ships' Ballast Water and Sediments , the United Nations Convention on the Law of the Sea , the International Convention for the Prevention of Pollution from Ships (MARPOL) , and the UN agreement on Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks have not offered any guidance on private sector engagement.
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade/ Chemicals and waste		The convention has not offered any guidance on private sector engagement.

Annex I: Nongrant projects

GEF ID	Title	GEF period	Reflow to GEF project
377	Community Based Rangeland Rehabilitation for Carbon Sequestration	Pilot	No
386	Optimizing Development of Small Hydel Resources in Hilly Areas	Pilot	No
391	Fuel Efficiency in the Road Transport Sector	Pilot	No
91	Small and Medium Scale Enterprise Program	GEF-1	No
111	Energy Efficiency Co-Financing Program	GEF-1	Yes
112	Photovoltaic Market Transformation Initiative	GEF-1	No
135	Small and Medium Scale Enterprise Program	GEF-1	Yes
267	Energy Efficiency Improvements and Greenhouse Gas Reductions	GEF-1	No
314	A Program for Rural Electrification with Renewable Energy Using the Popular Participation Law	GEF-1	No
448	Industrial Energy Efficiency Improvement Project	GEF-1	No
13	Removal of Barriers to Biomass Power Generation and Co-generation	GEF-2	No
540	Building Chiller Replacement Program	GEF-2	No
622	Energy Conservation and GHG Emission Reduction in Chinese Township and Village Enterprises (TVE), Phase II	GEF-2	No
641	Barrier Removal to Renewable Energy Programme	GEF-2	No
646	Market Development for Solar Water Heaters	GEF-2	No
658	Removing Barriers to the Increased Use of Biomass as an Energy Source	GEF-2	No
660	Barrier Removal to Secure PV Market Penetration in Semi-Urban Sudan	GEF-2	No
786	Krakow Energy Efficiency Project	GEF-2	No
843	Removal of Barriers to Rural Electrification with Renewable Energy	GEF-2	No
882	Removing Barriers to Improving Energy Efficiency of the Residential and Service Sectors	GEF-2	No
883	Energy Efficiency Project	GEF-2	No
935	Barrier Removal to Namibian Renewable Energy Programme, Phase I	GEF-2	No
944	Energy Efficiency Project	GEF-2	No
1237	Energy Conservation Project, Phase II	GEF-2	No
1264	Capacity Building to Remove Barriers to Renewable Energy Development	GEF-2	No
1265	Polish Energy Efficiency Motors Programme	GEF-2	No
1291	Renewable Energy Resources Project	GEF-2	No
1316	Energy Efficiency Co-Financing Program 2 (HEECP2)	GEF-2	No

GEF ID	Title	GEF period	Reflow to GEF project
1541	Commercializing Energy Efficiency Finance (CEEFF) - Tranche I	GEF-2	No
1571	EcoEnterprises Fund	GEF-2	No
1646	Cost Effective Energy Efficiency Measures in the Russian Educational Sector	GEF-2	No
1061	Inka Terra: An Innovative Partnership for Self-Financing Biodiversity Conservation & Community Development	GEF-3	No
1137	Promoting the Use of Renewable Energy Resources for Local Energy Supply	GEF-3	No
1198	Biomass Energy for Heating and Hot Water Supply	GEF-3	No
1199	Removal of Barriers to Biomass Power Generation, Part I	GEF-3	No
1245	Renewable Energy-based Rural Electrification	GEF-3	No
1335	Bioenergy for Sustainable Rural Development	GEF-3	No
1358	Renewable Energy-based Electricity Generation for Isolated Mini-grids	GEF-3	No
1361	Generation and Delivery of Renewable Energy Based Modern Energy Services in Cuba; the case of Isla de la Juventud	GEF-3	No
1413	Energy Efficiency Measures in the Honduran Commercial and Industry Sectors	GEF-3	No
1532	Electric Cooperative System Loss Reduction Project	GEF-3	No
1609	Renewable Energy Enterprise Development - Seed Capital Access Facility	GEF-3	No
2105	Conservation and Sustainable Use of Biodiversity in the Dalmatian Coast through Greening Coastal Development	GEF-3	No
2111	Russian Sustainable Energy Finance Program	GEF-3	No
2117	Energy Efficiency Project	GEF-3	No
2119	African Rift Geothermal Development Facility (ARGeo)	GEF-3	No
2256	Barrier Removal to Namibian Renewable Energy Programme (NAMREP), Phase II	GEF-3	No
2531	Sustainable Energy Program	GEF-3	No
2619	Financing Energy Efficiency and Renewable Energy Investments for Climate Change Mitigation	GEF-3	No
2624	China Utility-Based Energy Efficiency Finance Program (CHUEE)	GEF-3	No
2670	Central American Markets for Biodiversity (CAMBio): Mainstreaming Biodiversity Conservation and Sustainable use within Micro, Small and Medium-sized Enterprise Development and Financing	GEF-3	No
2939	Solar Water Heating Market Transformation and Strengthening Initiative, Phase 1	GEF-3	No
2944	Sustainable Energy Financing	GEF-3	Yes
3005	CleanTech Fund	GEF-3	No
3558	SP-SFIF: West Africa Regional Fisheries Program (WARFP)	GEF-3	No
2000	Environmental Business Finance Program (EBFP)	GEF-3	Yes
2941	Market Transformation for Energy Efficiency in Buildings	GEF-4	No
3597	RUS Improving Urban Housing Efficiency in the Russian Federation	GEF-4	No
3626	PAS: The Micronesia Challenge: Sustainable Finance Systems for Island Protected Area Management - under the GEF Pacific Alliance for Sustainability	GEF-4	No
3766	Testing a Prototype Caribbean Regional Fund for Wastewater Management (CRew)	GEF-4	No
4176	Encouraging the Establishment and Consolidation of an Energy Service Market in Chile	GEF-4	No
4257	The GEF Earth Fund: IFC Earth Fund Platform	GEF-4	Yes

GEF ID	Title	GEF period	Reflow to GEF project
4348	Reducing GHG Emissions through a Resource Efficiency Transformation Programme (ResET) for Industries in Kazakhstan	GEF-5	No
4427	Russia Energy Efficiency Financing (REEF) Project	GEF-5	No
4512	Pilot Asia-Pacific Climate Technology Network and Finance Center	GEF-5	No
4626	Geothermal Power Generation Program	GEF-5	No
4683	ARCTIC: Targeted Support for Energy Efficiency and Renewable Energy in the Russian Arctic	GEF-5	No
4753	Sustainable Energy Initiative for Industries	GEF-5	No
4784	Introduction of Energy Management System Standard in Ukrainian Industry	GEF-5	No
4788	Promoting Business Models for Increasing Penetration and Scaling up of Solar Energy	GEF-5	No
4801	Promotion of Non-fired Brick (NFB) Production and Utilization	GEF-5	No
4890	Towards a Green Economy in Uruguay: Stimulating Sustainable Production Practices and Low-emission Technologies in Prioritized Sectors	GEF-5	No
4918	Partial Risk Sharing Facility for Energy Efficiency	GEF-5	No
4957	Small and Medium Enterprise Energy Efficiency Project	GEF-5	No
5530	Green Shipping Programme for Russia	GEF-5	No
5704	Promoting Organic Waste-to-Energy and other Low-carbon Technologies in Small and Medium-scale Enterprises (SMMEs): Accelerating Biogas Market Development	GEF-5	No
4929	AfDB-PPP Public-Private Partnership Program	GEF-5	Yes
4959	IDB-PPP MIF Public-Private Partnership Program	GEF-5	Yes
5143	PPP-EBRD South Eastern Mediterranean EE/ESCO Markets Platform	GEF-5	Yes
5388	PPP-IDB Sustainable Caribbean Basin Private Equity Fund	GEF-5	Yes
5754	IDB-GEF Climate-Smart Agriculture Fund for Latin America and the Caribbean	GEF-5	Yes
6980	The International Lighting Efficiency Facility (iLEF)	GEF-6	Yes
9043	Investing in Renewable Energy Project Preparation under the Sustainable Energy Fund for Africa (SEFA)	GEF-6	Yes
9047	Green Logistics Program	GEF-6	Yes
9051	Moringa Agro-forestry Fund for Africa	GEF-6	Yes
9058	Impact Investment in Support of the Implementation of the Nagoya Protocol on Access and Benefit Sharing	GEF-6	Yes
9085	Equity Fund for the Small Projects Independent Power Producer Procurement Programme	GEF-6	Yes
9277	Risk Mitigation Instrument for Land Restoration (Nongrant)	GEF-6	Yes
9370	The Meloy Fund: A Fund for Sustainable Small-scale Fisheries in SE Asia	GEF-6	Yes
9563	Third South West Indian Ocean Fisheries Governance and Shared Growth Project (SWIOFish3)	GEF-6	Yes
9719	Piloting Innovative Investments for Sustainable Landscapes	GEF-6	Yes

Annex J: The GEF Earth Fund and its platforms

J.1 Introduction

The GEF Earth Fund was approved by the GEF Council and endorsed by the GEF CEO in May 2008 (midway through the GEF-4 programming cycle), as a pilot public-private partnership initiative with \$50 million of GEF resources plus another \$6 million to cover Agency fees.¹ The main features were as follows: (1) a private sector set-aside outside the RAF/STAR; (2) based on the concept of portfolios or “platforms” that were approved by the Council, with delegated authority then given to the Implementing Agencies to approve individual private sector projects within their already approved funding envelope; (3) establishment of an advisory Earth Fund Board to provide private sector expertise and recommendations to the Council; (3) a minimum of \$150 million of leverage was required, and specifically at least three times for each platform; (4) platform proposals needed to be well developed prior to Council approval

¹At the June 2006 Council meeting, the Council requested IFC, in collaboration with the Secretariat and the regional development banks, and in consultation with other Implementing and executing Agencies, to elaborate its proposal to enhance financing through a public-private sector partnership. The GEF PPP Initiative was approved in the Council work program of June 2007. Following extensive negotiations, the final project document for the GEF PPP Initiative (now renamed the GEF Earth Fund) was submitted to the Council on April 7, 2008, and was endorsed by the GEF CEO on May 27, 2008.

(i.e., not concepts) in order to facilitate a single step portfolio-level approval by the Council; and (5) industry, foundations, NGOs, and other partners were enabled to originate proposals that were subsequently developed in partnership with one or more GEF Agencies.

J.2 The IFC Earth Fund Platform

The first Earth Fund platform, the IFC Earth Fund Platform, was also approved and endorsed in May 2008.² The IFC Earth Fund Platform was allocated \$30 million of GEF resources plus Agency fees, which corresponded to 60 percent of the GEF Earth Fund’s resources.

An independent terminal review of the IFC Earth Fund Platform was issued by the professional services firm EY (formerly Ernst & Young) in August 2016 (EY 2016). It stated that the IFC Earth Fund Platform received an initial capitalization of \$40 million: \$30 million from the GEF Earth Fund and \$10 million from IFC. When the IFC Earth Fund Platform was approved, IFC received delegated authority from the GEF to approve IFC Earth Fund projects governed by IFC’s policies and procedures. This exempted IFC Earth Fund projects from GEF project cycle procedures, increasing flexibility, and speeding up the decision-making

²The final proposal for the IFC Earth Fund Platform was submitted to the Council on May 7, 2008.

process. The IFC Earth Fund Platform became operational in June 2008 and closed in June 2014.

IFC and the GEF recognized that market transformation is a long-term process that is unlikely to be achieved through a single project, but requires long-term support. Furthermore, both organizations recognized that the private sector plays a central role in driving market change. As a result, the IFC Earth Fund Platform was supposed to focus its interventions on creating “lasting change in market behavior by removing identified barriers,” such as access to finance, lack of technical capacity, or insufficient market knowledge, particularly by focusing on testing, piloting, and scaling up interventions:

- **Testing and piloting interventions:** Support demonstrations that show the ability to mitigate or eliminate the perceived risk associated with new technologies, financial products, and business models
- **Scaling up interventions:** Support scale-up initiatives of previously successfully tested technologies, financial products, or business models to encourage widespread adoption

The IFC Earth Fund Platform’s realized project portfolio is described in the EY evaluation report (EY 2016, 16). A total of 14 projects have been supported (5 investment services and 9 advisory services projects; table J.1). The current portfolio of projects totals \$38.1 million in funds from the platform and covers 16 countries. Project costs total \$1.068 billion 26.7 times the allocated \$40 million of GEF and IFC concessional financing). Of this, about \$1.0 billion is for investment services and \$48.6 million for advisory services. Committed concessional financing totals \$38.1 million, with \$28.6 million for investment services projects and \$9.5 million for advisory services projects.

Overall program performance of the IFC Earth Fund Platform was rated as highly successful. The evaluation notes that “while the GEF’s initial vision of the Earth Fund as a hybrid institution that would absorb private sector funds directly never materialized” (EY 2016, 33), the IFC Earth Fund Platform was very successful in establishing a mechanism for investing GEF funds alongside IFC funds and mobilizing investments from commercial investors in projects that generate returns and achieve environmental benefits. The IFC Earth Fund Platform’s position in investing early in certain areas or technologies helped demonstrate viability and encourage other participants to join the market, as well as giving IFC a leadership role in assisting other donors in understanding market needs. This is notably the case for International Housing Solutions (an equity investment to promote development of affordable “green” homes in South Africa), in which IFC’s early investment led to a follow-on KfW (German development bank) investment.

The experience of the IFC Earth Fund Platform also shaped IFC’s approach to blended finance, including development of blended finance principles and governance of blended finance operations at IFC.

J.3 GEF Earth Fund programming

Following the initial approval and endorsement of the GEF Earth Fund and the IFC Earth Fund Platform in May 2008, the attention of the Secretariat turned to programming the remaining \$20 million of the \$50 million of GEF resources dedicated to the GEF Earth Fund. Before additional programming could be done, it was necessary to establish the Earth Fund Board and obtain Council approval for a set of procedures governing its operation (GEF 2009). The IFC Earth Fund Platform was not subject to the guidance of the Earth Fund Board or the approved and endorsed Earth Fund procedures, and as it was independently managed by IFC.

TABLE J.1 IFC Earth Fund Platform projects

Title	Description	Type	Funds approved (million \$)	Leverage ratio
Ongoing				
International Housing Solutions (IHS)	Equity investment in a leading real estate development of affordable green homes in South Africa	Investment	10.000	1:3
Quarzazate	Equity investment to support concentrated solar power plant development in Morocco	Investment	10.000	1:83.1
Lighting Global	Program and technical support for companies that provide modern lighting services for unelectrified populations	Advisory	0.695	1:6.1
Green Buildings PDP	Development of a web platform and software to help housing developers meet green building standards	Advisory	1.000	1:3.3
Bank of the Philippines Islands (BPI) Sustainable Energy Finance (SEF) II	Risk-sharing facility to support a leading financial institution in the Philippines in its lending business for sustainable energy projects	Investment	2.600	1:26.5
Mexico Sustainable Energy Finance (SEF)	Technical assistance program to promote sustainable energy lending among financial institutions in Mexico	Advisory	0.800	1:0.7
Cleantech Innovation Facility	Investment in a “cleantech” venture capital fund managed by IFC to support early stage cleantech companies operating in challenging geographies and markets	Investment	5.000	1:3
Global Cleaner Production Facility	Global cleaner production facility to support cleaner production projects	Advisory	5.800	1:4.1
Completed				
Africa Renewable Energy Advisory Services (AREAS) South Africa	Technical assistance program to help South Africa meet its targets for universal electrification	Advisory	0.196	1:5.5
Green Power for Mobile Global II	Technical assistance program to increase the deployment of renewable energy and energy efficiency technologies for mobile network tower base stations	Advisory	0.350	1:8.3
Brazil Environmental Permits	Technical assistance program to improve the regulatory environment for sustainable forestry in Brazil	Advisory	0.183	1:2.6
Techcom-bank	Senior loan to a financial institution in Vietnam to encourage energy efficiency and cleaner production lending	Investment	1.000	1:36
Research and Engagement on Private Equity Investing in Climate Change Abatement (RECCIPE)	Support capital allocation to investment funds in climate change-related sectors	Advisory	0.200	1:5.2
Carbon Index	Development of a carbon efficiency index	Advisory	0.272	1:5.8

It is important to note that the “GEF’s initial vision of the Earth Fund as a hybrid institution that would absorb private sector funds” (EY 2016, 33) was merely an initial vision promoted by the Secretariat, and it was not the Earth Fund project design that was approved by the Council and endorsed by the GEF CEO in May 2008.

The first meeting of the Earth Fund Board was held in April 2009, by which time four initial board members had been appointed, including then-GEF CEO Monique Barbut as chair. At this meeting, a draft of the Earth Fund procedures and two Earth Fund platform proposals were reviewed and recommended for approval. In June 2009, the Earth Fund procedures and the two Earth Fund platforms (each \$5 million in GEF funding) were approved by the Council and subsequently endorsed by the CEO. This formalized operationalization of the remainder of the GEF Earth Fund other than the IFC Earth Fund Platform.

The second meeting of the Earth Fund Board was held in February 2010. At this meeting, another two Earth Fund platforms (again each \$5 million in GEF funding) were reviewed and recommended for approval. In March 2010, these two platforms were approved by the Council and subsequently endorsed by the CEO. Thus, all \$50 million of the GEF Earth Fund resources had been programmed by March 2010.³

³The successful programming of all pilot phase GEF Earth Fund resources facilitated allocation of the \$80 million set aside in the 2010 GEF replenishment for an expansion of the Earth Fund or other private sector initiative in GEF-5. The GEF IEO’s evaluation of the Earth Fund (GEF IEO 2011) contained four recommendations—basically to define the objectives, niche, and market barriers to be addressed by the Earth Fund; clarify access to the Earth Fund; and strengthen its management for GEF-5. At the GEF Council meeting in November 2010, the Council decided to request the Secretariat—in collaboration with the GEF Agencies

The five Earth Fund platforms and their main participants are as follows:

- **IFC Earth Fund Platform (\$30 million GEF):** IFC and its investment and advisory clients
- **Global Market Transformation for Efficient Lighting (\$5 million GEF):** UNEP, Osram, and Philips Lighting in partnership with a range of institutional and other partners
- **Conservation Agreement Private Partnership Platform (\$5 million GEF):** UNEP and Conservation International in partnership with community organizations and SMEs
- **Greening the Cocoa Industry (\$5 million GEF):** UNEP and Rainforest Alliance in partnership with Mars, Incorporated, and Kraft Foods (Mondelez) and other partners
- **Latin American Water Funds Partnership (\$5 million GEF):** IDB and the Nature Conservancy with foundation, corporate, utility, and government partners

Given that the other four Earth Fund platforms were initiated one to two years after the IFC Earth Fund Platform, terminal evaluations for these other platforms should be available soon. At that time, it will be possible to have a more complete evaluation and assessment of the overall GEF Earth Fund. At this time, the following preliminary conclusions can be drawn:

- The five Earth Fund platforms propose a variety of ways of engaging the private sector: direct equity and debt investment, intervention

and representatives of the private sector, foundations, and civil society organizations—to prepare for the May 2011 Council meeting a Revised Strategy for Enhancing Engagement with the Private Sector (GEF 2011b). This strategy was to provide a clear analysis of the gaps and opportunities for GEF activities, which would secure good value for GEF resources.

in supply chain management, using corporate funds and expertise to support policy and market development, creating demand for an agricultural commodity produced in a sustainable fashion, and creating local mixed-ownership approaches to finance protection of the water supply through watershed management.

The Secretariat's initial vision for the GEF Earth Fund as a hybrid institution that would absorb private sector funds directly was not the final project that was approved by the Council and endorsed by the GEF CEO in May 2008. In particular, the GEF Earth Fund was not approved and endorsed as an investment fund (in the normal commercial usage of the term). It was actually approved as a GEF project.⁴

- The fund's first two years, 2008–09, coincided with the global financial crisis; this may have put an early damper on the progress of the IFC Earth Fund Platform as far as launching investment projects was concerned. However, it did not delay approval of the other four Earth Fund platforms (including evidence of their required financial leverage). The IFC Earth Fund Platform's progress with investments improved markedly after 2010.

⁴For example, the Earth Fund Board was initially proposed by the Secretariat to be a decision-making body; however, after extensive negotiations with Council members and GEF Agencies, it was agreed that funding approval decisions for Earth Fund platforms would remain with the Council and that the Earth Fund Board would be constituted as an advisory body to bring industrial and commercial finance expertise. A similar dispute initially took place in connection with the Green Climate Fund. The GCF Board finally decided to constitute the Private Sector Advisory Group as an advisory body, with the GCF Board making the funding decisions itself.

- The terminal evaluation of the IFC Earth Fund Platform in August 2016 indicated that it was highly successful. Terminal evaluations are forthcoming awaited for the other four Earth Fund platforms.
- The private sector set-aside featuring a single-step Council portfolio-level approval of platforms along with full delegated authority for approval of subprojects has been proven to streamline and accelerate the approval process for Earth Fund platforms and projects and to facilitate private sector engagement and high investment leverage.
- The Earth Fund Board did not feature very positively in the GEF IEO review (GEF IEO 2011); however, it was not fully resourced at that time (with only four members, including the GEF CEO) and had only been in place for only one year. A proposal was made by the Secretariat in the GEF-5 Programming Directions (GEF Secretariat 2010) to strengthen it. A similar advisory body, the Private Sector Advisory Group, is in place at the GCF; it has already made some robust and useful recommendations. The GCF advisory group has 10 external experts and 4 GCF Board members.
- If the GEF Council wishes to consider formation of a GEF private sector facility or similar body for GEF-7, the Earth Fund (particularly its proposed expansion for GEF-5 as documented in the Programming Directions) provides a structure that appears to encompass the key governance and operational procedures that would be relevant for such an entity. Indeed, the Earth Fund could rightfully be regarded as a pilot stage private sector facility. A rigorous examination of lessons learned from the Earth Fund may now or will soon be useful in light of the recent and pending terminal evaluations of its platforms.

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