

GEF Council Meeting

November 5 – 7, 2013

Washington, D.C.

Agenda Item 10

DRAFT GEF 2020 LONG-TERM STRATEGY

Contents

Preface	2
Executive Summary	4
1. The Case for Change	7
2. Targeting the Drivers of Environmental Degradation	20
3. Enhancing Our Impact	31
4. The Path Forward	42
Annex I: Analysis of GEF-5 PIFs	51
Annex II: Buildings, Transport and Electric Power as Drivers of Environmental Degradation	57
Annex III: Operationalizing Private Sector Engagement.....	65
Annex IV: Operationalizing Results Based Management and Knowledge management Systems	72

Preface

Humans are now the overwhelming force in shaping changes to the global environment, be it biodiversity loss, climate change, land degradation or any other domain. This means that it is society's responsibility to ensure that we continue to operate within earth's safe bio-physical boundaries. Unfortunately, many trends are not heading in the right direction. Atmospheric CO₂ concentration now exceeds 400 ppm and continues to rise. In the past decade, the globe has lost about 13 million ha of forest cover annually and the world is witnessing what scientists characterize as the 6th great mass extinction of species.

This is a make-or-break period in the global efforts to turn around the worrying trends in the global environment. Nations have set themselves ambitious targets to be achieved before 2020, as expressed for example in the Aichi Biodiversity Targets and the decision to seek a legally binding global agreement in 2015 to cut greenhouse gas emissions. In parallel, efforts are ongoing to develop a set of sustainable development goals to cover the period post-2015.

The GEF's core mission is to help ensure the sustainable use of ecosystems and resources, upon which all life depends. Our premise is that the environment is an essential pre-condition for sustainable development and are we committed to work that is both people-centered and planet-sensitive.

We have a proud history since we were established on the eve of the first Earth Summit in Rio in 1992. In the past two decades, we have fulfilled a unique role by providing critical assistance to recipient countries to generate global environmental benefits in support of their national sustainable development objectives.

We continue to have impact, but it is clear that we can further improve on our delivery of global environmental benefits. We are winning small battles, but together with our partners are still losing the war on global environmental degradation.

Achieving our mission requires us to leverage our central role as a partner of choice for environmental leadership. As a global leader, we need to take a much more proactive stance and a programmatic approach in adding value to environmental initiatives, leveraging the uniqueness of our mandate, the scale and scope of our activities, and the breadth and depth of our partnerships. Looking ahead, we want to continuously optimize our projects to have the highest potential to propel us toward our mission.

Our vision for 2020 is to be a champion of the global environment by creating partnerships and strategically investing in solutions that:

- (1) Address the underlying drivers of global environmental degradation.* With an emphasis on driver-focused solutions, we will be able to address the root causes of environmental degradation at local, national and international levels, while still addressing important environmental pressures where critical for the delivery of global environmental benefits. We will give preference to proactive over reactive approaches, with a view to enhancing our impact.
- (2) Innovate and achieve global environmental benefits at scale.* Our funds should be invested in projects that are highly innovative and have the potential to be scalable across multiple countries and regions, rather than a one-off project in a country. These projects should also aim to stimulate policy, market or behavioural transformations. While working at the individual country level, we will focus on how country actions can be scaled up and create spillovers that have larger regional and global environmental benefits.
- (3) Deliver the highest impact, cost-effectively.* We must focus on maximizing the global environmental benefits we can create with our funds by identifying cost-effective solutions to global environmental challenges.

What follows in this document is the rationale and roadmap for GEF 2020.

Executive Summary

1. THE CASE FOR CHANGE

- Since the GEF's inception, the external and internal context within which we operate has changed dramatically.
- The world's environmental challenges have intensified. There has been a rapid deterioration across many environmental domains, and in some cases, breaching of safe planetary boundaries with respect to environmental issues.
- The landscape of environmental finance players has also changed, with the entrance of new players as well as growth and changing roles of existing players. Existing global players have increased their focus on environmental sustainability, while new players such as development banks in emerging economies and newly created agencies are claiming their places in the environmental financing landscape. These players present the GEF with new partnership opportunities, and also with the need to sharpen our own unique value proposition.
- The expansion in our range of partners, the number of multinational environmental conventions we serve, programs and program objectives, and the associated increased complexity calls for more integrated approaches moving forward.
- While we have had successes in the past, "business as usual" will not be sufficient to address global environment degradation in the future. Our current operating model falls short of the impact imperative. For this reason, a bolder, more ambitious strategy is needed in order to live up to our mandate to be the steward of the global environment.

2. TARGETING THE DRIVERS OF ENVIRONMENTAL DEGRADATION

- To work toward our mission, we must be cognizant of the socioeconomic megatrends that are underpinning the pressure on the global environment. Three megatrends stand out: (i) a continuous increase in the global population; (ii) a rising global middle class; (iii) and global trends toward urbanization. The choices of how people obtain the materials they need, grow food, get from place to place, and build homes and communities have profound impacts on the global environment. Understanding the causal chain of factors that lead to environmental degradation allows us to take a holistic view, and enables the identification of targeted upstream interventions.
- A drivers-focused approach is effective because it tackles the root causes of environmental degradation, has cascading downstream effects, can create synergistic environmental benefits across our programs and contributes to broader socioeconomic goals. We already address drivers of environmental degradation in many projects today, but we have the opportunity to increase our concerted and systematic focus on them.
- Interventions focused on environmental pressures further down the causal chain will continue to play an important role in protecting assets of global significance. Such projects can also

help and reducing risks of tipping a major ecosystem or biome into a new state with significant loss of biodiversity and ecosystem services.

3. ENHANCING OUR IMPACT

- In order to deliver global environmental benefits at scale, the GEF must pick points in the causal chain of environmental degradation where we can deliver the most impact and utilize the most appropriate influencing models in the design of interventions.
- Selecting influencing models, individually or in combination, will be essential to effectively address the barriers to action in relation to the point of intervention. Our experience shows that the barriers that need to be overcome to motivate action include policy challenges, awareness and behavioral gaps, finance challenges, technology challenges, and coordination failures. The most important GEF influencing models will be:
 - *Transforming policy and regulatory frameworks*, by supporting actions that ensure policies, regulations and fiscal instruments are aligned with incentivizing environmental stewardship.
 - *Demonstrating innovative approaches*, by supporting the testing and scale up of new technologies, practices or policies that generate environmental benefits and creating iconic models that facilitate replication elsewhere.
 - *Strengthening institutional capacity and decision-making processes*, by strengthening data and information to promote transparent, inclusive, and accountable decision-making; establishing conditions for improved coordination across agencies; supporting decision-making on natural resources at local levels; and supporting capacity building.
 - *Convening multi-stakeholder alliances*, by forming alliances of business, governments, and/or civil society for the purpose of advancing environmental goals.
 - *De-risking and incrementally financing investment*, by providing grants, debt, equity, guarantees, structured products, and other de-risking mechanisms for projects that are close to commercialization.
- As we bring these influencing models to bear on the most important drivers or pressures of global environmental degradation, we will work with recipient countries, implementing agencies and other partners to ensure that the selected interventions maximize our joint impact.
- It will be critical to ensure that our interventions are *scalable*. That is, designed to have an impact through broader adoption and replication by other governments, private sector actors, intermediaries, and through “ripple effects” that run beyond our project interventions themselves.

4. THE PATH FORWARD

- Several aspects of our operational framework are particularly important when it comes to translating the key strategic principles into practical operational steps. Taken together, the operational changes will help us ensure that our investments are scalable and not only one-off

efforts. Throughout the operational changes, we will maintain our dedication to our mission, to the conventions in which we are rooted, and to the concept of country ownership. These aspects are:

- *Focus of programing:* A more targeted approach to the types of activities we invest in will enhance our ability to deliver the best possible outcomes for the multilateral environmental conventions for which the GEF is the/a financial mechanism; we must invest the resources entrusted to the GEF in programs and projects that can deliver results at scale across our target global environmental areas. In addition, resilience considerations are set to become increasingly important in project selection and design.
- *Allocation of resources:* We need to allocate the resources at our disposal optimally, to scale up our impact and more effectively respond to cross-cutting challenges and achieve multiple goals across our programing areas. We will continue to explore the best possible ways to allocate resources. The aim will be to maximize environmental benefits per dollar spent by expanding options for flexibility and focus, while also ensuring we serve the needs of recipient countries with wide ranges of roles to play in global solutions.
- *Reinvigorating the GEF partnerships:* Partnerships are a critical part of the GEF's operating model. Four key partners—our recipient countries, our implementing agencies, civil society organizations and the private sector—are particularly critical to bringing the expertise and implementing actions to bear on the drivers that matter. A more driver-focused approach requires a reinvigorated GEF partnership in order for us to be able to create the necessary platforms that can bring relevant stakeholders to the table. In addition to strengthen our relationships with existing partners we will seek to broaden our relationships to new partners, who may have important contributions to the efforts of the GEF community to achieve scalable environmental benefits.
- *Strengthening results and knowledge management.* Significant changes are needed in our results management systems if we are to improve our effectiveness, and target our scarce resources more strategically. Going forward, we will seek to (i) measure what matters, by focusing on a select set of core indicators measured uniformly in order to support a more streamlined and effective results management system; (ii) close the project feedback loop, to ensure continuous learning throughout the project cycle; (iii) conduct periodic in-depth, *ex-post* analyses of our results to understand the impact of our portfolio by program and across programs; (iv) strengthen knowledge networks, thereby providing the means to both generate and disseminate lessons that are of the highest relevance; and (v) explore new frontiers for global environmental action to inform global decision-making.

1. The Case for Change

The GEF is at a crossroads. While we have been successful in delivering global environmental benefits in the past, business as usual will not be sufficient to arrest the pace and address the complexity of the global environmental degradation we are witnessing today. The external and internal contexts within which we operate are changing rapidly. Externally, accelerating socioeconomic trends create new environmental challenges, scientific understanding of those challenges is growing, and the financial landscape is shifting. Our *internal context* has also changed, with new partners, new program areas, and new conventions to serve. These changing external and internal contexts are combining to create a strong *impetus for change*. Thus, we must identify innovative ways to address the pressing challenges we face, do so at scale, and also redefine our role to find our appropriate niche in a changing landscape. In doing so, we will continue to be guided by the objectives of the various multilateral environmental Conventions for which we serve as financial mechanism, and the sustainable development priorities of our recipient countries.

External context: emerging challenges and a changing landscape

Despite our successes, the magnitude of the environmental challenges we face is greater now than ever before (Exhibit 1).

- *The risk of devastating impacts from climate change continues to grow.* On our current trajectory, average temperatures could exceed the preindustrial era average by 4.0°C as early as the 2060s.¹ This will result in unprecedented heat waves, severe droughts, and major flooding across many regions, adversely affecting both people and ecosystems.
- *Many species are at risk of extinction.* Almost a quarter of all plant species are now threatened with extinction, and the populations of vertebrate species declined by nearly a third on average between 1970 and 2003.² Biodiversity declined by 30 percent globally between 1970 and 2007, and by 60 percent in tropical regions.³ In addition, freshwater wetlands, sea ice habitats, salt marshes, coral reefs, seagrass beds, and shellfish reefs are in decline.
- **Deforestation threatens species and contributes to climate change.** Deforestation – a key contributor to both climate change and biodiversity loss – remains high globally, despite promising trends in some regions. Thirty percent of global forest cover has been cleared and 20 percent degraded. Carbon dioxide emissions from deforestation and forest degradation amount to 12 percent of total human-caused emissions (excluding peat).^{4,5,6}

¹ A report for the World Bank by the Potsdam Institute for Climate Analytics. 2012. Turn Down the Heat: Why a 4 degree C warmer world must be avoided. IBRD / The World Bank, Washington, D.C.

² World Wide Fund for Nature. 2006. Living Planet Report 2006. World Wide Fund for Nature, Gland, Switzerland.

³ *Ibid.*

⁴ van der Werf, G.R. et al. 2009. “CO₂ emissions from forest loss.” *Nature Geoscience* 2:737-738.

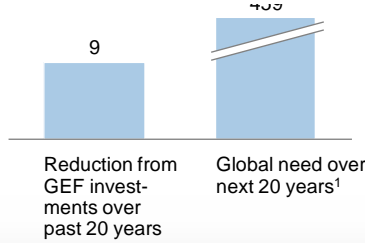
⁵ Peters, G. P. et al. 2012. “Rapid growth in CO₂ emissions after the 2008-2009 global financial crisis.” *Nature Climate Change* 2:2-4.

Exhibit 1

Despite our progress, the global need remains great

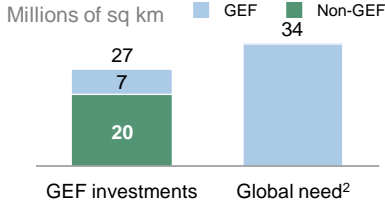
GHG emission reduction

Billion tons



Protected areas

Millions of sq km



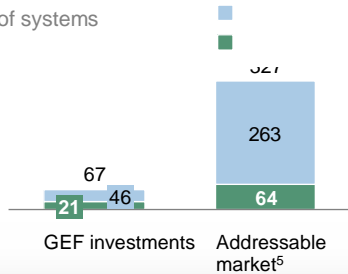
Securing productive landscapes

Millions of sq km



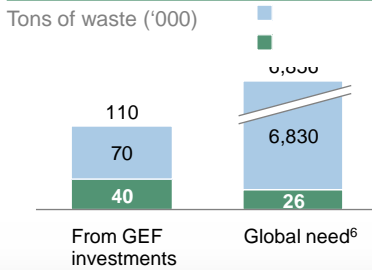
Collaboration on shared water systems

of systems



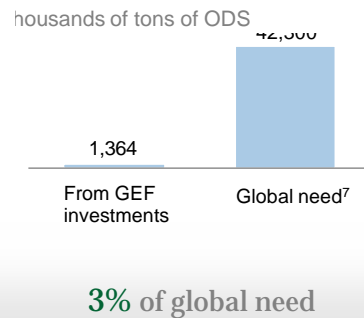
POP waste disposal

Tons of waste ('000)



DS reduction

hundreds of tons of ODS



Tracker data; Team analysis

Note: Global need figures represent need across all countries, while our mandate extends only to developing countries and CEITs

1 Emissions reductions required against business as usual scenario (2013 -33) to achieve an emissions trajectory that is likely to limit warming to below 2 degrees C

2 From Aichi Target 11, that 17 percent of the surface of the planet should be protected by 2020

3 UNCCD estimates of area affected by human induced land degradation

4 Includes transboundary lakes and aquifers

5 UNEP/GRID – Arenal data on international river and lake basins

6 Estimates from national implementation plans submitted to the Stockholm Convention Secretariat

7 Montreal Protocol phase-out targets, combined Phase I and Phase II; in metric tons

⁶ Friedlingstein, P. and I. C. Prentice. 2010. "Carbon-climate feedbacks: a review of model and observation based estimates." Current Opinion in Environmental Sustainability 2:251-257.

- **Fisheries are collapsing at an alarming rate.** Around 85 percent of global fish stocks are either depleted, overexploited, fully exploited or in a period of recovery from overexploitation.⁷ Fisheries management efforts are not keeping pace with accelerating rates of exploitation.
- **Chemical pollution continues to threaten our ecosystems.** Land, water and air quality and ecosystem health are threatened by increasing chemical pollution, particularly from persistent organic pollutants (POPs) and heavy metals such as mercury.
- **Growing nitrogen pollution threatens freshwater and marine ecosystems.** Nitrogen pollution from diverse sources including agriculture, aquaculture, urban wastewater, urban storm water runoff, industry, and fossil fuel combustion are increasingly being released into freshwater and coastal areas. This is resulting in a growing number of coastal areas suffering from low oxygen or Hypoxia, which is adding to pressures on marine ecosystems. In each of the last five decades, the number of hypoxic coastal areas has doubled. More than 500 hypoxic zones threaten critical ecological areas, including the majority of the world's large marine ecosystems⁸.

These are just a few of the challenges that illustrate the intensification of global environmental challenges, and which underscore our urgent need to do more to arrest these downward trends.

Science has significantly enhanced global awareness and understanding of the scope of environmental challenges. We now have better data on the extent to which the global environment is degraded, the links among environmental issues, and the link between the environment and socioeconomic goals. A group of Earth system and environmental scientists have proposed a framework based on the notion of planetary boundaries as a “safe operating space for humanity.”⁹ Sustainable development can only occur within those boundaries. Research shows that anthropogenic pressures push key Earth life support systems near or beyond “tipping points,” after which the possibility of abrupt or irreversible global environmental changes can no longer be excluded (Exhibit 2). Estimates suggest that biodiversity loss, climate change, and biogeochemical boundaries have already been crossed

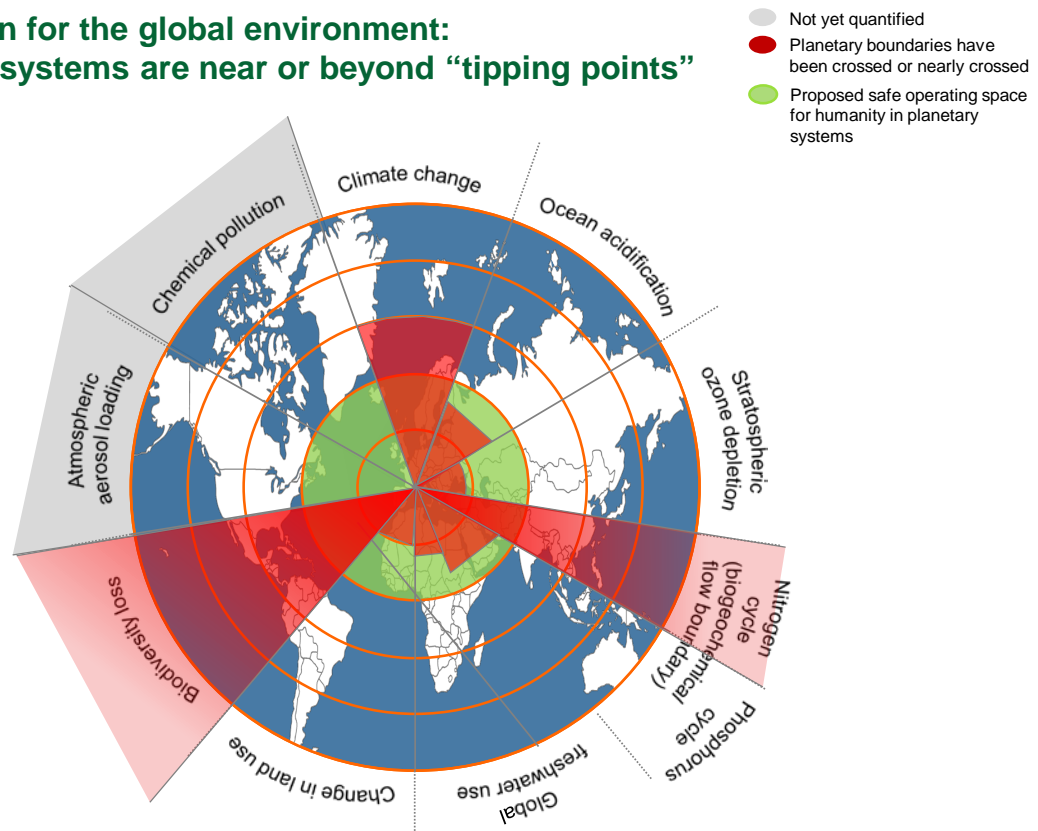
⁷ FAO, 2012. The State of World Fisheries and Aquaculture 2012. FAO, Rome.

⁸ Hypoxia and Nutrient Reduction in the Coastal Zone Advice for Prevention, Remediation and Research: A STAP advisory document, September 2011

⁹ Rockstrom, J. et al. 2009. A safe operating space for humanity. Nature 461:472-475.

Exhibit 2

Countdown for the global environment: Key Earth systems are near or beyond “tipping points”



Source: Rockstrom et al, "A Safe Operating Space for Humanity," Nature (2009)

We are already breaching ecological limits in today's US \$70 trillion global economy; yet nominal global gross domestic product is expected to be as high as US \$140 trillion by 2030.¹⁰ According to the World Economic Forum (WEF), around US \$5 trillion annually will be invested in infrastructure globally by 2020.¹¹ This signals an enormous challenge for reversing trends of environmental degradation and remaining within a safe operating space for humanity. We will need to move decisively to decouple growth from increasing resource consumption and environmental degradation. WEF further estimates that nearly US \$700 billion more will be needed to ensure that the US \$5 trillion invested does not undermine long-term environmental sustainability.

¹⁰ EIA Annual Energy Outlook 2009 projections to 2030.

¹¹ World Economic Forum. 2013. The Green Investment Report: The ways and means to unlock private finance for green growth.

Human well-being and long-term economic development depend on ecosystem services—the benefits that people derive from nature. The Millennium Ecosystem Assessment (MA) found that in just 50 years, humans have radically altered ecosystems to meet their growing need for food, freshwater, timber, fiber, and fuel. Fifteen out of twenty-four ecosystem services globally have been degraded in the past 50 years (Exhibit 3).

Exhibit 3

60% of ecosystem services globally were degraded over the past 50 years

	Degraded	Mixed	Enhanced
Provisioning	<ul style="list-style-type: none"> ▪ Capture fisheries ▪ Wild food ▪ Biomass fuel ▪ Genetic resources ▪ Bio-chemicals, natural medicines and pharmaceuticals ▪ Fresh water 	<ul style="list-style-type: none"> ▪ Timber and wood fiber ▪ Other fibers (e.g., cotton, hemp, silk) 	<ul style="list-style-type: none"> ▪ Crops ▪ Livestock ▪ Aquaculture
Regulating	<ul style="list-style-type: none"> ▪ Air quality regulation ▪ Regional and local climate regulation ▪ Erosion regulation ▪ Water purification and waste treatment ▪ Peat regulation ▪ Pollination ▪ Natural hazard regulation 	<ul style="list-style-type: none"> ▪ Water regulation ▪ Disease regulation 	<ul style="list-style-type: none"> ▪ Global climate regulation (carbon sequestration)
Cultural	<ul style="list-style-type: none"> ▪ Spiritual, religious, or cultural heritage values ▪ Aesthetic value 	<ul style="list-style-type: none"> ▪ Recreation and ecotourism 	

Source: Millennium Ecosystem Assessment 2005

For humans, there are both benefits and costs to ecosystem change. Ecosystem changes have led to improvements in human health and a reduction in the proportion of malnourished people. But at the same time, the MA's findings indicate that interventions to increase provisioning services (such as crops, livestock, and aquaculture) are compromising other services that ecosystems provide. These include provisioning services such as genetic resources and freshwater; regulating services such as water purification, pollination, and erosion regulation; and cultural services such as spiritual or aesthetic enrichment. These findings suggest that the gains in human well-being may not be sustainable over time. The MA concluded that degradation of ecosystem services presents a significant barrier to achieving development goals worldwide.

Three socioeconomic trends—population growth, the rising middle class, and urbanization — underlie the drivers of ecosystem degradation.

Population growth. Global population is expected to rise from just over 7 billion in 2012 to 9.3 billion by 2050, with almost half of this growth in sub-Saharan Africa. Sub-Saharan Africa, where 27 percent of people are undernourished,¹² also has the world’s lowest crop yields, with cereal yields one-half of the world average.¹³ In addition, soil quality is poor throughout much of the region, depleted of organic matter and nutrients.¹⁴ Together, these factors will likely increase pressure to convert natural landscapes to agriculture use, increasing pressure on the environment.

Rapidly rising global middle class. The global middle-class – those with a daily consumption between US \$10 and US \$100 – is expected to grow to nearly 5 billion by 2030, with 66 percent of these 5 billion living in Asia.¹⁵ This change will drive an increase in global consumption that could accelerate global environmental degradation. Combined with a growing population, the burgeoning middle class is a major factor in a projected increase in demand for a number of key resources (Exhibit 4), including increases in primary energy demand of 33 percent and increases in food calories required globally by 2030, and large increases in demand for buildings and transport by 2050.^{16,17} These trends will result in additional environmental pressures throughout our environmental areas of focus, threatening to accelerate climate change, biodiversity loss, land degradation, chemical pollution, degradation of international water bodies, and deforestation.

¹² FAO, WFP, and IFAD (Food and Agriculture Organization of the United Nations, World Food Programme, and International Fund for Agricultural Development). 2012. *The State of Food Insecurity in the World 2012*. Rome: FAO.

¹³ Calculations from FAO. 2012. FAOSTAT. Rome: FAO.

¹⁴ Swift, M. J. and K. D. Shepherd (Eds). 2007. “Saving Africa’s Soils: Science and Technology for Improved Soil Management in Africa.” Nairobi: World Agroforestry Centre.

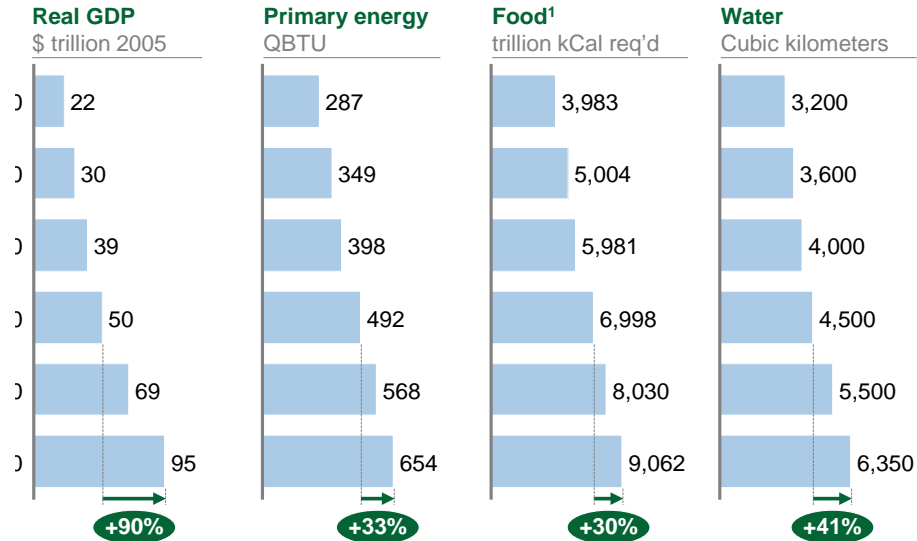
¹⁵ Kharas, H. 2010. The Emerging Middle Class in Developing Countries. OECD Development Centre Working Paper No. 285, 28: <http://www.oecd.org/dataoecd/12/52/44457738.pdf>

¹⁶ Dobbs et al, 2011. Resource Revolution. McKinsey and Company.

¹⁷ Searchinger et al, 2013. The Great Balancing Act: installment 1 of “Creating a Sustainable Food Future.” World Resources Institute, Washington, D.C.

Exhibit 4

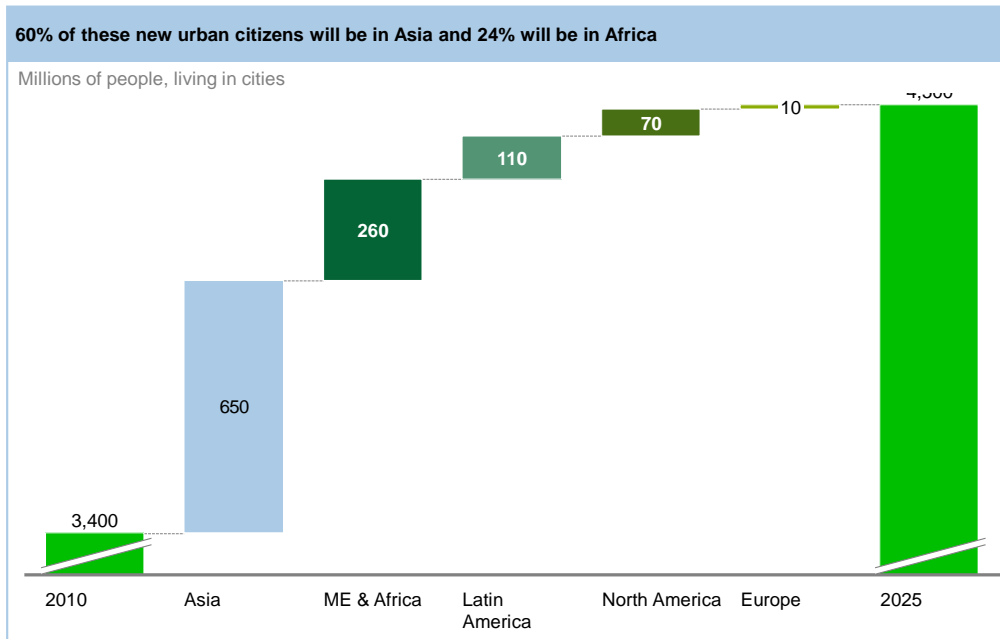
Demand for most resources has grown strongly since 2000, a trend that is likely to continue to 2030, driven by growing incomes and population



Source: Global insight; IEA; UN Environment Program (UNEP); McKinsey analysis in McKinsey and Company, 2011. "Resource Revolution," FAO 2012 (Food Balance Sheets), UNDESA 2013 (World Population Prospects: The 2012 Revision), WRI 2013 (Creating a Sustainable Food Future).

Exhibit 5

There will be over 1 billion additional urban citizens by 2025



Source: OECD, 'The Emerging Middle Class in Developing Countries,' 2010; McKinsey, 'Continuing Urbanization and the Rise of Megacities,' 2010

Increasingly urban population. By 2025, more than a billion additional people are expected to live in cities, most of them in Asia (Exhibit 5). Urban areas already account for over 90 percent of the world's gross domestic product and more than 70 percent of global greenhouse gas emissions.¹⁸ However, the ecological footprints of urban areas vary significantly, depending on size, wealth, geography, and the capacity and foresight of local authorities, and the United Nations suggests that “[u]rban localities actually offer better chances for long-term sustainability, starting with the fact that they concentrate half the Earth’s population on less than 3 per cent of its land area.”¹⁹ The rapid rate of urbanization provides an unprecedented opportunity to design smarter cities with an eye toward long-term sustainability.

These three socioeconomic trends—population growth, the rising middle class, and urbanization—result in rising demand to provide for much-needed improvements in human well-being, especially for the one billion poorest people. But they can also result in adverse effects on people and the global environment. Although humanity has progressed in using resources efficiently, this progress has proven inadequate to offset increased consumption by a growing, more prosperous and increasingly urban human population.

In parallel, the financial landscape that we are operating in is also changing rapidly. Domestic savings and investments by the private sector in developing countries are growing rapidly, as are net foreign direct investment flows. For example, net foreign direct investment flows to developing countries have grown from just a few billion dollars annually in the 1970s to an estimated US \$703 billion in 2012.²⁰ The environmental finance landscape is also changing. New entrants similar to us, such as the Green Climate Fund and the Climate Investment Funds, have entered in the arena particularly to address climate change needs. Private investors, including pension funds and sovereign wealth funds, are also increasingly investing in public-private partnerships focused on green investments as well as green bonds. Traditional players such as the World Bank and regional development banks have also intensified their focus on environmental sustainability. In some emerging economies, national development banks and state-owned policy banks are emerging as major players in environmentally relevant finance.

The scale of these investments and proliferation of actors presents challenges, but also offers opportunities for us to shape how public and private investments can be redirected to address the most pressing environmental problems. Leveraging capital sources towards green investments will require that the limited public finance available, both domestic and international including our own resources, is used catalytically to provide all investors with the right signals and incentives to achieve global environmental results effectively and efficiently.

There is a growing recognition that environment and development are interdependent— not competing— objectives. While the impacts of economic development on the environment are

¹⁸The Rise and Rise of Urban Expansion”, Michail Fragkias, Karen C Seto, Global Change International Geosphere-Biosphere Programme, Issue 78, March 2010 , cited in STAP, 2013. “Enhancing the GEF’s Contribution to Sustainable Development.” GEF/R.6/Inf. 03

¹⁹United Nations Population Fund. 2007. *State of the World Population 2007: Unleashing the Potential of Urban Growth*, 55.

²⁰ Inward net foreign direct investments to developing economies, From UNCTADStat Database, <http://unctadstat.unctad.org>, August 2013.

well-understood, the impact of environmental degradation on economic development is less appreciated. Evidence is mounting that environmental degradation is impeding economic development, especially in some regions (Exhibit 6). A World Bank report estimated that the average cost of environmental degradation across 20 countries amounted to 8% of GDP.²¹

Restrictions on economic growth can have significant consequences for development objectives. Thus, we need to do more to ensure that stakeholders recognize the value of investing in the environment to meet social and economic objectives. With the expiry of the Millennium Development Goals in 2015, there is an opportunity to craft a transformative post-2015 development agenda that fully integrates the social, economic and environmental strands of sustainability allowing for goals that are both people-centered and respectful of our planetary boundaries. The process of crafting the agenda is already underway; with our mission, vision and mandate clearly in mind, we must play an active role in a new global partnership for development that will help countries to meet their sustainable development goals.

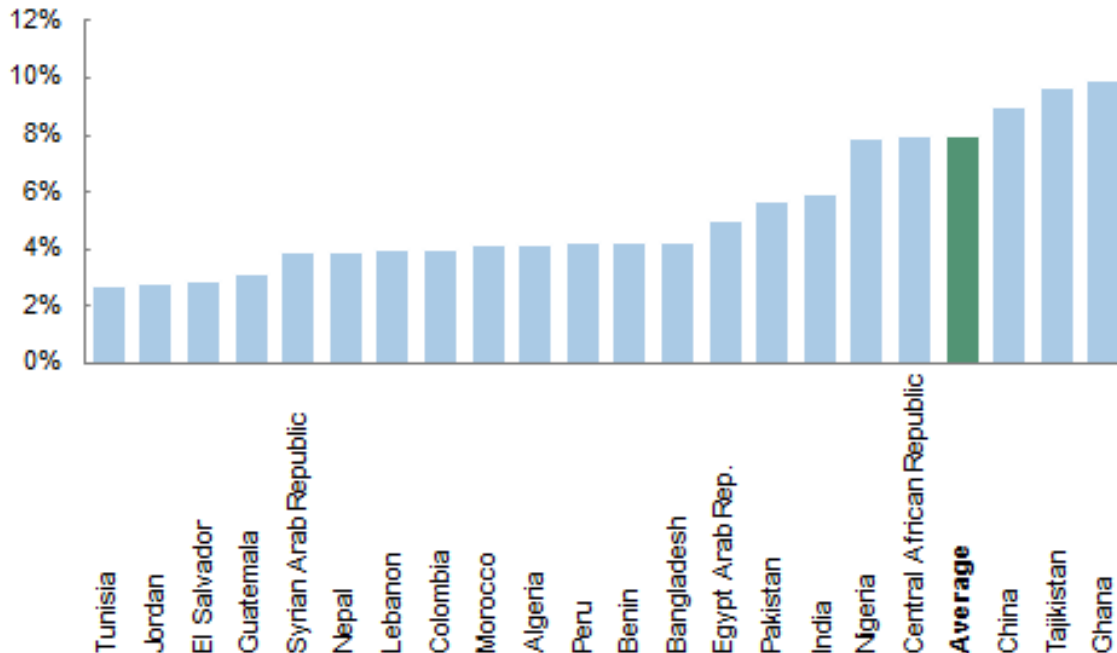
The Framework for Action from the Rio+20 Sustainable Development Conference reaffirms the themes of the 1992 Earth Summit. But the Framework also went further than its predecessor in identifying the gaps that must be filled to build a truly transformative sustainable development framework. Most of these gaps relate to the multi-disciplinary nature of the threats to the global environmental commons, and the solutions to those threats. Our work spans many of the priority themes and gaps identified in the Rio+20 Framework. This offers an opportunity to maximize our contribution to the post-2015 process while building on our existing comparative advantages.

²¹ More recently the World Bank estimated that environmental degradation is restricting India's economic growth, costing it US \$80 billion per year, or 5.7 percent of its gross domestic product. "India - Diagnostic assessment of select environmental challenges: An analysis of physical and monetary losses of environmental health and natural resources" (July 2013). <http://documents.worldbank.org/curated/en/2013/06/18009327/>

Exhibit 6

Reducing environmental degradation would provide substantial economic benefits

Cost of environmental degradation expressed as percentage of GDP equivalent



Source: World Bank, 2012. Inclusive Green Growth. World Bank: Washington, D.C.

Internal context: new partners, programs, and the push to realize synergies

Our founding purpose—to protect the global environment—remains our *raison d'être* even today. However, we have grown and evolved significantly. Our history can be described by three major phases:

Phase I: Emergence of a new partnership. The late 1980s and early 1990s marked the birth and emergence of our organization. Following a 1989 U.N.-commissioned World Resources Institute study that called for the creation of a new fund for projects that produce global environmental benefits, the World Bank established a pilot program to help developing countries advance global environmental benefits with concessional funding. Following the 1992 Rio Earth Summit, we became a separate institution mandated to serve as a financing mechanism to enable developing countries to fulfill their obligations under two global environmental conventions: the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity. We were designed as a partnership, working with the United Nations Development Programme, the United Nations Environment Programme, and the World Bank to maximize synergies by leveraging each institution's comparative advantage.

Phase II: Growth and complexity. The next decade was a period of growth and. New conventions, such as the Stockholm Convention on Persistent Organic Pollutants in 2001 and the

United Nations Convention to Combat Desertification in 2003, came under our purview. We developed new programmatic areas, such as sustainable forest management in 2007, that benefit the agenda of the United Nations Forum on Forests (UNFF). These new programs, along with the onboarding of seven new partner agencies, helped us carve out a niche and crystallize a multilateral assistance agenda on the global environment. In 2005, we introduced a resource allocation system to improve the effectiveness and predictability of our programming.

In the mid-2000s, the Parties to the UNFCCC mandated us to set up two new funds with a focus on funding climate change adaptation activities – the Least Developed Countries Fund (LDCF), and the Strategic Climate Change Fund (SCCF). It was also during this time that an ever-more compelling case for climate resilience emerged, pointing to a need to consider more fully adaptation and resilience when addressing global environmental challenges. Initially, we operated the Strategic Priority on Adaptation, which combined the integration of adaptation measures into global environmental benefits. Reflecting guidance from the GEF Council, we have a history of incorporating adaptation considerations into our programming. More recently we have begun to support multi-focal and multi-trust fund projects, including those that combined strategic objectives and funding of LDCF or SCCF with that of Biodiversity, International Waters, Land Degradation, and Climate Change Mitigation, in part building on our Scientific and Technical Advisory Panel's (STAP) document, *Enhancing Resilience to Reduce Climate Risks: Scientific Rationale for the Sustained Delivery of GEBs in the GEF Focal Areas* (2010).

Thus, we established ourselves during this time as a key multilateral fund for the global environment, and built capacity and credibility by bringing financing solutions to global environmental issues and integrating environmental issues into the global sustainable development agenda. But, while we continued to help put global environmental issues on countries' policy agendas during this period, we also became more complex.

Phase III: Renewed quest for synergies. This decade continues to be a period of expansion for the 'GEF family.' We will serve as the financial mechanism for a new treaty – the Minamata Convention on Mercury. We are in the process of accrediting new implementing agencies, including nongovernmental and national institutions. We are positioning ourselves as a unique multilateral funding mechanism for our ability to integrate inter-linked and reinforcing objectives of various Conventions to promote more cost-effective and high-impact cross-cutting initiatives. For example, we are working with the Convention on Biological Diversity and the other related Conventions to produce a joint framework that best integrates and optimizes delivery of biological resources on the ground.

As this period of change unfolds, a new emphasis on seeking synergies across different global environment and development issues is emerging, as is an imperative to scale up the delivery of environmental benefits by tackling the underlying drivers of environmental degradation. This was evident at the recent Rio +20 Conference on Sustainable Development, where the momentum behind integration of global environment and development issues was stronger than ever. This is also a period where financial resources, particularly from governments, are severely constrained in the face of a global economic slowdown. Confronted by the changing external context, we face new opportunities and challenges that force us to reassess our role, our priorities, and our approaches. We, too, must change if we are to have an effective, efficient, and scaled up impact on environmental conditions and trends.

The impetus for change

We need to do better to have a meaningful impact on environmental trends. Indeed, the GEF Evaluation Office's recent initial report of the Fifth Overall Performance Study (OPS-5) found that while more than 71 percent of our projects had an impact on reducing environmental degradation, only 20 percent currently show evidence of achieving impact at a system scale beyond the direct impacts at the site of an intervention. This means that a significant majority of our completed projects have not yet demonstrated a system-scale impact, although they may lead to such impact in the future.^{22, 23}

OPS-5 notes that “improvements in environmental status at these [higher] scales require a much broader adoption of the promoted approaches and technologies.”²⁴ This will require us to purposefully build elements of scale into our approach. The Evaluation Office's recent South China Sea Impact Evaluation—which looked at 34 GEF projects across seven countries – concluded that more programmatic approaches would ensure that our investments have coherence and that the results add up to more than what we can achieve on a project-by-project basis.²⁵

STAP has also underscored the need for us to shift our approach. They note that we can only achieve transformational outcomes “by breaking away from single technology and/or single sector approaches towards a focus on systemic approaches.” They recommend that our projects seek broader outcomes beyond single program silos, better address the key drivers of environmental degradation and not solely the pressure points, and develop a comprehensive approach toward scaling up the impact of our investments.²⁶

A changing context—externally and internally—presents new opportunities and challenges that impel us to step back and take stock. Moreover, the findings and the recommendations of the Evaluation Office and the STAP point us to a need for change. This strategy paper lays the groundwork for changing our approach by defining a causal chain framework for the drivers of environmental degradation, making the case for an increased focus on drivers, and laying out

²²Global Environment Facility Evaluation Office. 2013. Fifth overall performance study of the GEF, First report: Cumulative evidence on the challenging pathways to impact. Global Environment Facility Evaluation Office, Washington, D.C.

²³Note: the Evaluation Office differentiates local- and system-scale impacts as follows: “Local-scale impacts refer to those that result directly from site-level interventions, and which occur only within the geographical area/s where the project has introduced specific technologies and approaches. System-scale impacts, on the other hand, refer to those that have been observed to occur within the specific ecosystems, administrative areas, or sectors that the project is targeting. For example, this may be a certain bay or watershed (ecosystem), province or country (administrative area), or manufacturing industry (sector). This implies that local-scale impacts have led to such widespread changes that they can be observed at this higher scale.” The Evaluation Office defines limited impact as “projects that have achieved neither systemic nor local impact.”

²⁴Global Environment Facility Evaluation Office. 2013. Fifth overall performance study of the GEF, First report: Cumulative evidence on the challenging pathways to impact. Global Environment Facility Evaluation Office, Washington, D.C.

²⁵Global Environment Facility Evaluation Office. 2012. Impact Evaluation of GEF International Waters Support to the South China Sea and Adjacent Areas. Global Environment Facility Evaluation Office, Washington, D.C.

²⁶ STAP, 2013. Enhancing the GEF's Contribution to Sustainable Development. GEF/R.6/Inf.03. Available at <http://www.thegef.org/council-meeting-documents/enhancing-gefs-contribution-sustainable-development>

path forward to enable us to scale up the delivery of global environmental benefits in a cost-effective and synergistic manner.

2. Targeting the Drivers of Environmental Degradation

Development aspirations and the global environment are inextricably linked. The choices individuals and countries make in about how to pursue prosperity and how to grow economies change the environment. The choices of how people obtain the materials they need, grow food, get from place to place, and build homes and communities drive environmental change. Responses to the environmental pressures that result from these choices—cleaning up water pollution or managing hazardous waste—have not been sufficient to slow, halt, and reverse worsening global environmental trends.

To gain significantly more global environmental benefits from our work, we must enhance our focus on interventions that invest in nature *for* development rather than primarily working to protect nature *from* development. This entails taking a more integrated and systemic approach based on the causal chain of environmental change, and identifying the key underlying drivers for us to tackle. We will strengthen our focus on tackling these drivers, while continuing to invest in reducing environmental pressures when it is the most effective course of action from the perspective of delivering global environmental benefits. We believe this approach will help ensure our investments deliver greater global environmental benefits across our programs over the long-term, and help advance the ultimate objectives of the Conventions more effectively.

The causal chain of environmental change

We have developed a framework of the causal chain of environmental change to help us identify the underlying drivers of environmental change and guide where we target our interventions. This framework in Exhibit 7 shows how socioeconomic trends generate human demand for goods and services (indirect drivers), which are then met by production processes (direct drivers) that create pressures on the environment. These pressures, in turn, yield adverse environmental impacts that lead to a change in the state of the environment. Each element in the causal chain of environmental change is described below:

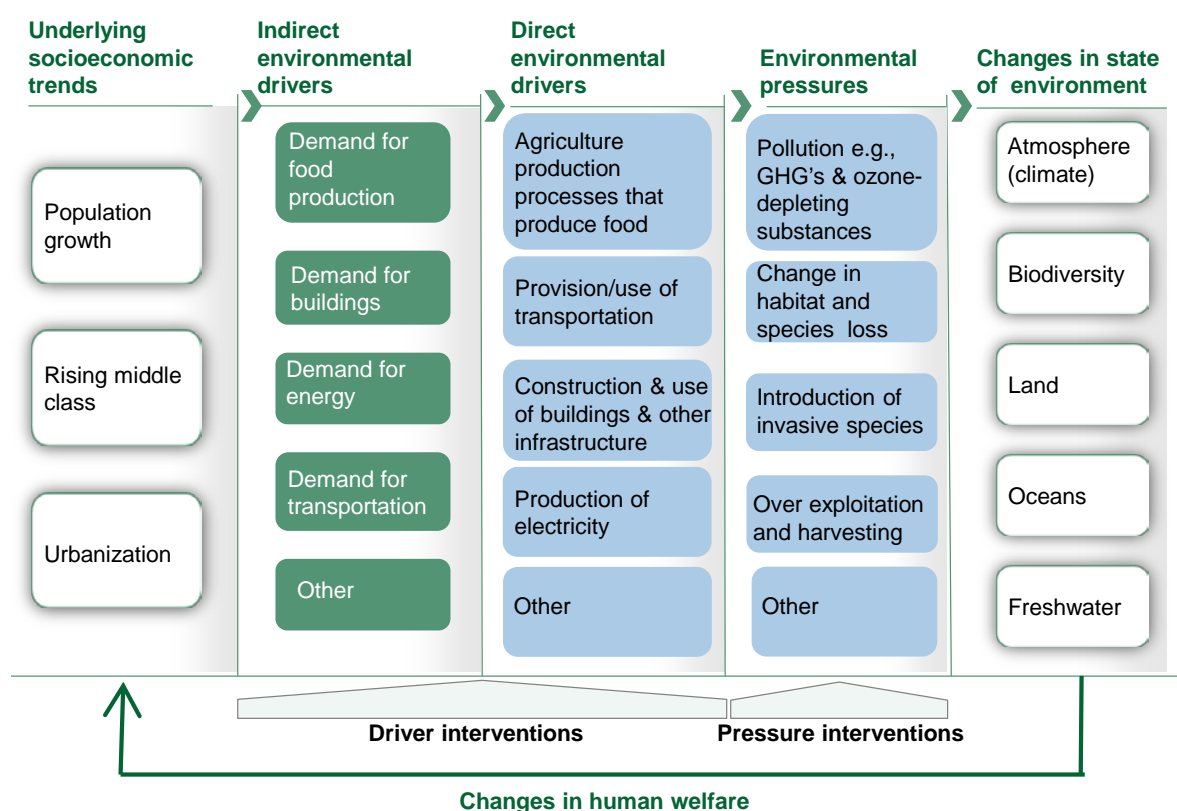
- *Indirect environmental drivers* refer to human demand for products and services that create environmental pressures by moderating one or more direct drivers of environmental change. Indirect drivers include demand for goods and services such as meat, electricity, and cars.
- *Indirect driver-focused interventions* moderate demand-side (indirect) drivers by promoting demand for more sustainable goods and services and/or reducing demand for products and services that generate negative pressures on the environment. Such interventions could include, for example, strategies to reduce food waste by consumers, efficiency standards for electricity consumption in households and industry, or government policies for procurement of more environmentally friendly projects.
-
- *Direct environmental drivers* refer to the human processes and activities that supply the goods and services that give rise to environmental pressures. Direct environmental drivers

include agriculture practices that result in fertilizer run-off to water bodies or convert natural ecosystems to cropland, power plants that emit air pollutants, and the use of vehicles that emit carbon dioxide emissions.

- *Direct driver-focused interventions* moderate supply side (direct) drivers by reducing the supply of products, processes or services that negatively impact the environment, increasing the efficiency of resource use, and/or increasing the supply of alternative processes or products that reduce environmental pressure. Sample interventions include changing agricultural practices to minimize nitrogen run-off from soil or increasing renewable supply.

Exhibit 7

The causal chain of environmental change



Source: Team analysis, adapted from FAO/UNEP DPSIR/DPSWR (drivers, pressures, state, impact/welfare and response) frameworks and the Millennium Ecosystem Assessment, Ecosystems and Human well-being Biodiversity Synthesis, World Resources Institute, 2005.

- *Environmental pressures* are the means by which direct drivers impact the state of the environment. Examples include polluting emissions such as greenhouse gas emissions, the introduction of invasive species, changes in habitat, and overexploitation and overharvesting of natural resources (such as the depletion of fish stocks).

- *Pressure-focused interventions* moderate environmental pressures by mitigating the adverse environmental impacts of direct environmental drivers. Pressure-focused interventions may include protecting an endemic species of global significance threatened by an advancing agriculture frontier, methane capture at a coal mine, and demonstrating technologies that reduce automobile tailpipe emissions.

There is no universally accepted framework for defining the causal chain between the underlying socioeconomic trends and the global environmental state. The framework presented in Exhibit 7 builds on those developed by other institutions and adapts them to the context within which we operate.²⁷ In adapting these frameworks, we draw a more nuanced distinction between indirect and direct environmental drivers, and pressures. In practice, a spectrum of drivers link socioeconomic trends to environmental pressures and changes in the state of the global environment. Multiple direct and indirect drivers may exist upstream of any given environmental pressure. For example, a growing global middle class increases per capita meat consumption and demand for cattle. This, in turn, may drive forest clearance for agricultural use, resulting in species loss.

In addition, the causal chain can cut across spatial scales – global, national and local. For example, one country’s policy to promote biofuels may lead to the conversion of land previously used for the production of cattle feed in another country, resulting in a similar causal chain. In another example, growing urbanization in a coastal city can generate water pollution that affects the biodiversity in the coastal area by destroying molluscan fauna. Notwithstanding the differences between various causal frameworks and the complexity in the spectrum of drivers that eventually result in pressures on the global environment, this framework provides a robust foundation for us to identify the most strategic intervention points to deliver scalable global environmental benefits.

The rationale for tackling drivers of environmental degradation

Tackling drivers can help us deliver greater global environmental benefits from our investments. There are four reasons why an increased focus on interventions targeting drivers can be more effective:

(i) Tackling the root causes of global environmental degradation

By focusing on drivers we can move up the causal chain of environmental degradation to tackle the root causes of environmental degradation. The old adage “an ounce of prevention is worth a pound of cure” captures this point well. Driver-focused interventions address the underlying causes of environmental degradation at a systemic level, thereby reducing the need for mitigation or environmental pressures or local remediation. It also reduces the risk that pressure-focused interventions may result in the underlying source of the problem moving to another location, where environmental governance is weaker.

²⁷ In particular, it draws on the DPSIR/DPSWR (drivers, pressures, state, impact/welfare and response) framework used by the Food and Agriculture Organization of the United Nations, the United Nations Environment Programme in the Global Environment Outlook, the European Union and others, as well as the Millennium Ecosystem Assessment Framework, which further distinguishes between indirect and direct drivers.

Consider, for example, a project that seeks to mitigate the electric power sector's greenhouse gas emissions through a pressure intervention the supply chain, such as coal mine methane capture. By contrast, a drivers-focused intervention that reduces demand for energy through end use energy efficiency measures or compact city planning, can provide a more cost-effective and beneficial method for reducing greenhouse gas emissions by reducing the demand for coal mining.

We have already had success using drivers-focused interventions. Our investment in the “GloBallast Water Management” project, for example, tackled the driver behind the introduction of invasive species in marine ecosystems—a major threat to global marine biodiversity.²⁸ After identifying the transfer of ballast water from the global shipping industry as the major direct driver of marine invasive species, we helped foster an international convention that will ensure that the shipping industry manages ballast water more effectively. This convention will catalyze investment from the private sector to change ballast water practices, worldwide.

(ii) Delivering cascading global environmental benefits along the causal chain

The further upstream in the causal chain an intervention is made, the greater the potential for reducing downstream environmental pressures. Causal chains often contain multiple drivers of environmental pressures. As a result, upstream interventions that tackle indirect drivers can create cascading environmental benefits by reducing the environmental pressures from multiple downstream drivers. This can lead to a magnifying effect along the causal chain, resulting in greater reductions in environmental pressures per environmental benefits than can be achieved by pressures-focused interventions. This magnifying effect includes the environmental benefits generated by avoiding downstream production inefficiencies. Consider, for example, an indirect driver intervention that reduces consumer demand for food by reducing end-use food waste through improved packaging and labeling. This upstream reduction of food waste, in turn, reduces environmental pressures at every step downstream the agriculture supply chain, e.g., production, processing, transportation or retail.

(iii) Creating synergies across our programs, delivering multiple global environmental benefits and improving our cost-effectiveness

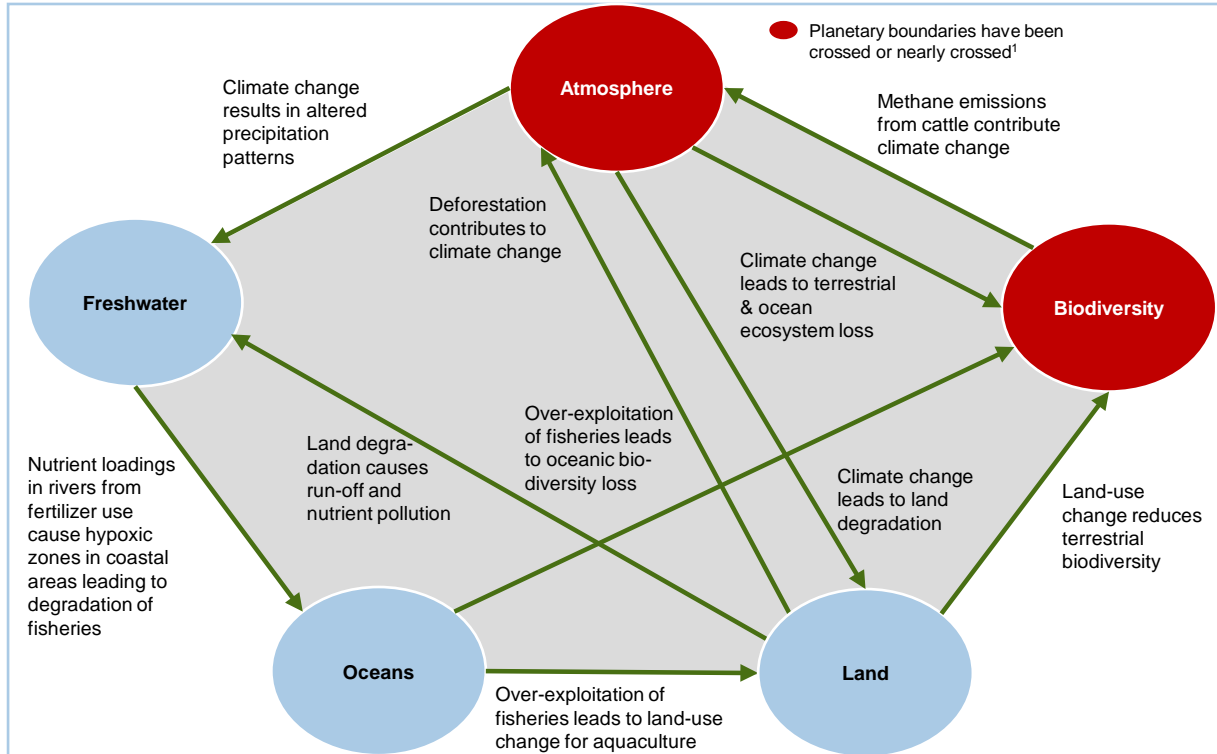
Driver-focused interventions that tackle drivers that have an impact across our programs can create synergies and deliver multiple global environmental benefits. Exhibit 8 illustrates the role of the food sector in driving environmental pressures across our programs. By focusing on drivers relevant to multiple environmental issues, we can drive greater cooperation, engaging in more systemic efforts to maximize the ecosystem services that span our programs and the Conventions we serve. Furthermore, by generating multiple environmental benefits, we will improve the cost-effectiveness of our investments, taking advantage of our unique position of serving multiple Conventions in an institutionally efficient manner.

²⁸ Bax, N. et al. 2003. “Marine invasive alien species: a threat to global biodiversity.” *Emerging Issues in Oceans, Coasts and Islands* 27(4):313-323.

Exhibit 8

By focusing on drivers in the food sector we can deliver environmental benefits across our programs

ILLUSTRATIVE



¹ Rockstrom et al, "A Safe Operating Space for Humanity," Nature (2009)

Source: Searchinger, T. et al. 2013. "The Great Balancing Act." Working Paper, Installment 1 of Creating a Sustainable Food Future. World Resources Institute; own analysis

(iv) Aligning global environmental objectives with national and global socioeconomic development priorities

Environmental, social and economic development challenges are deeply entwined. By increasing our focus on the drivers of environmental degradation, we can identify and act upon opportunities to integrate these three strands of sustainability, allowing for interventions that are both people-centered and planet-sensitive. This can support the global community's efforts to eradicate poverty and transform economies through sustainable development as part of the post-2015 development agenda and sustainable development goal process.²⁹ For example, by tackling the direct driver of vehicle use through advancing fuel economy standards, it is possible to simultaneously reduce transport-related greenhouse gas emissions, deliver economic benefits through savings on fuel bills, and yield public health benefits from air quality improvements.

²⁹Report of the Secretary-General's High-level Panel of Eminent Persons on the Post-2015 Development Agenda available at: <http://www.un.org/sg/management/beyond2015.shtml>

By moving up the causal chain from environmental pressures to tackle drivers, we help countries make their development more sustainable. The resulting socioeconomic benefits that can arise from sustainable development will further enhance the cost-effectiveness of our interventions to donors and recipient countries. The GEF Scientific and Technical Advisory Panel (STAP) also suggested that by dealing with challenges across energy, urban areas and agriculture we can yield multiple global environmental benefits.³⁰

Sectors that are the biggest drivers of global environmental degradation across our programs

In order to promote synergies and improve our cost-effectiveness we should focus on sectors that drive the biggest impact across our programs and that generate significant environmental pressures globally. An initial assessment of the relative contribution of different sectors of the economy to four key environmental pressures – greenhouse gas emissions, land use change and water use and water pollution – point to drivers in the food, transport, buildings, and electric power sectors. Collectively, these four sectors are responsible for most of the environmental pressures affecting the atmosphere, land, as well as water use and quality (Exhibit 9).³¹ A similar analysis for biodiversity loss, ocean acidification and chemical pollution would be needed to identify key sectors driving degradation in these areas.

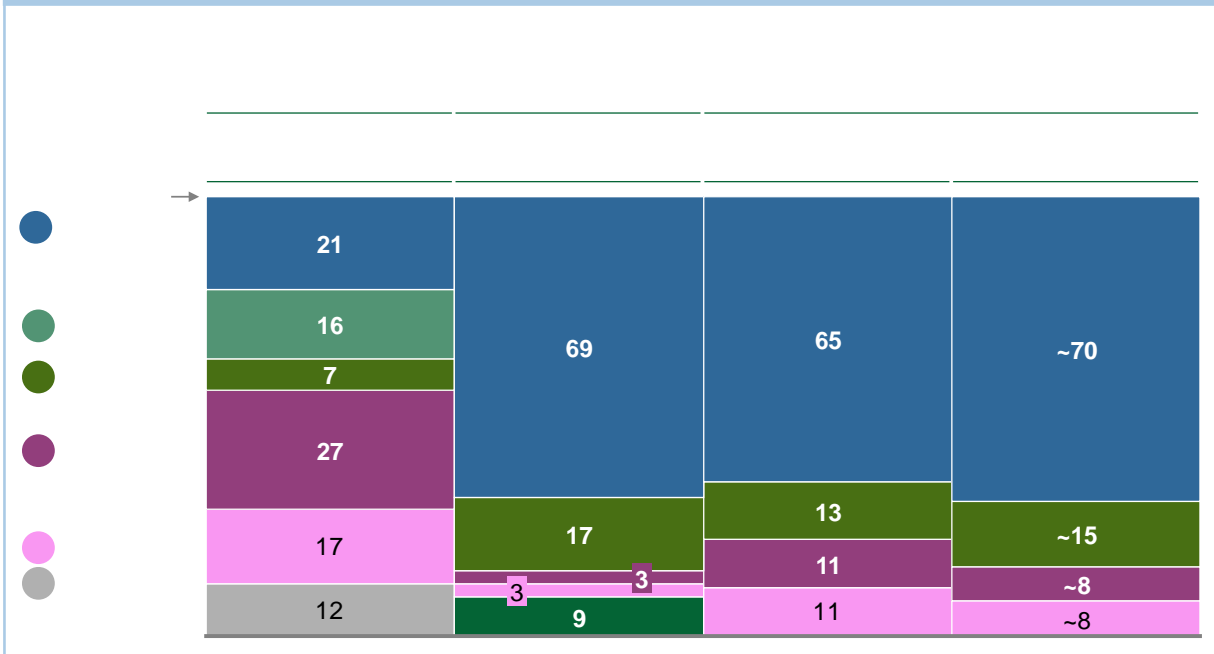
³⁰STAP, 2013. Enhancing the GEF's Contribution to Sustainable Development. GEF/R.6/Inf.03. Available at http://www.thegef.org/gef/sites/thegef.org/files/documents/GEF.R.6.Inf_.03_STAP%20Paper.pdf

³¹ While other sectors in the analysis (under the “materials” and “other industry” headings) also contribute substantially to environmental degradation, food, buildings and transport, and electric power together are the most significant drivers of degradation.

Exhibit 9

Food, buildings, transport, and electric power drive the majority of environmental pressures across atmosphere, land and water

Estimated share of environmental pressures by sector
% of total environmental pressure



1. Steel, coal, and chemicals comprise the materials' water withdrawals from China. Iron, steel, chemicals, and concrete comprise materials' emissions
2. Textiles are nearly half of the 'other' water withdrawals for China. Petroleum and gas represents 6 percent of 'other' emissions. Biofuels constitute the 'other' source of land-use change
3. Estimates for greenhouse gas emissions are for 2030 based on McKinsey report, 'Pathway to a Low Carbon Economy' (2009)
4. Based on estimated required increase of 175 million hectares to satisfy food and energy needs in 2030. Sources: IIASA, FAO, IFPRI, IPCC, World Bank, WRI, and McKinsey. Deforestation is included as in land use change with 80 percent of deforestation occurring for agriculture and 15-20 percent for timber
5. Estimates for water withdrawals are for 2030 based on McKinsey report, 'Charting our Water Future' (2009)
6. Galloway et al (2008), 'Transformation of the nitrogen cycle: recent trends, questions, and potential solutions,' Science (2008)

An analysis of the environmental pressures of the food sector provides a useful illustration of what we mean by tacking drivers, why and how. The food sector already creates major environmental pressures across several of our programs. This is expected to further increase in the future. The supply of food calories will need to rise by 60 percent from 2006 to feed an

expected population of 9 billion by 2050.³² It is imperative that we take steps to make the food sector more sustainable, if we are to have any chance of serving our mission.

The food sector has multiple impacts across our programs that include:

- *Climate change:* Agriculture accounted for approximately 21 percent of global greenhouse gas emissions in 2010. This includes 13 percent from agricultural production, namely methane from livestock, nitrous oxide from fertilizer use, and carbon dioxide from tractors and fertilizer production. Land use change, which is primarily driven by agriculture, contributes about another 11 percent.³³ Three commodities are of special relevance to our climate change objectives. Cattle, palm oil, and rice together contribute approximately 50 percent of all food production-related greenhouse gas emissions.³⁴
- *Ecosystems and biodiversity.* Today 50 percent of the planet's landmass (excluding Antarctica, deserts, permanent ice, and inland water bodies) is dedicated to growing food.³⁵ The agriculture frontier continues to expand and is the dominant driver of tropical deforestation, the loss of biodiversity contained in these forests, and the conversion of carbon-rich peat lands. In fact, 70-90 percent of global tropical deforestation is driven by agriculture extensification (Exhibit 10).³⁶ Food production is expected to remain the primary direct driver of land-use change in 2030. An additional 120 million hectares of land is expected to be needed by 2030 to meet food needs.³⁷ The Millennium Ecosystem Assessment predicted that future expansion of agriculture will continue to be one of the major drivers of biodiversity loss well into the twenty-first century.³⁸
- *Water.* Agriculture today accounts for approximately 70 percent of all freshwater withdrawn from rivers, lakes, and aquifers, and for 80-90 percent of such water that is actually consumed and not returned.³⁹ Nutrient runoff from farm fields can create "dead zones" and degrade coastal waters around the world.⁴⁰ By 2030, many countries are expected to face severe water shortages; with food production projected to drive over 65 percent of global water demand (Exhibit 11). Wheat and rice are the largest agricultural drivers of water withdrawals in India, China, and Africa. Rice accounts for nearly 50 percent of agricultural water demand in China; rice and wheat together account for nearly 60 percent of agricultural water demand in India and Africa

³² Searchinger, T. et al. 2013. The Great Balancing Act. World Resources Institute, Washington, D.C.

³³ World Resources Institute analysis based on UNEP (2012), FAO (2012), EIA (2012), IEA (2012), and Houghton (2008) with adjustments.

³⁴ McKinsey Global GHG Cost Curve Version 2.0, 2009

³⁵ Figures exclude Antarctica. FAO (2011).

³⁶ Ranges are due to a number of sources. Houghton, "The Role of Forests in the Global Carbon Cycle," (2006); Geist & Lambin, "What Drives Tropical Deforestation," (2001); McKinsey, 'The Global Land-Use Challenge: Feeding the World's Nine Billion Sustainability in 2050,' 2011

³⁷ Dobbs et al, 2011. Resource Revolution. McKinsey and Company.

³⁸ Millennium Ecosystem Assessment, Ecosystems and Human well-being Biodiversity Synthesis, World Resources Institute, 2005.

³⁹ Foley, J. A., et al. 2005. "Global Consequences of Land Use." Science 309: 570–574.

⁴⁰ Selman, M., and S. Greenhalgh. 2009. Eutrophication: Sources and Drivers of Nutrient Pollution. WRI Policy Note. Washington, DC: World Resources Institute.

Exhibit 10

70-90% of global tropical deforestation is due to agriculture for food production, depending on the region

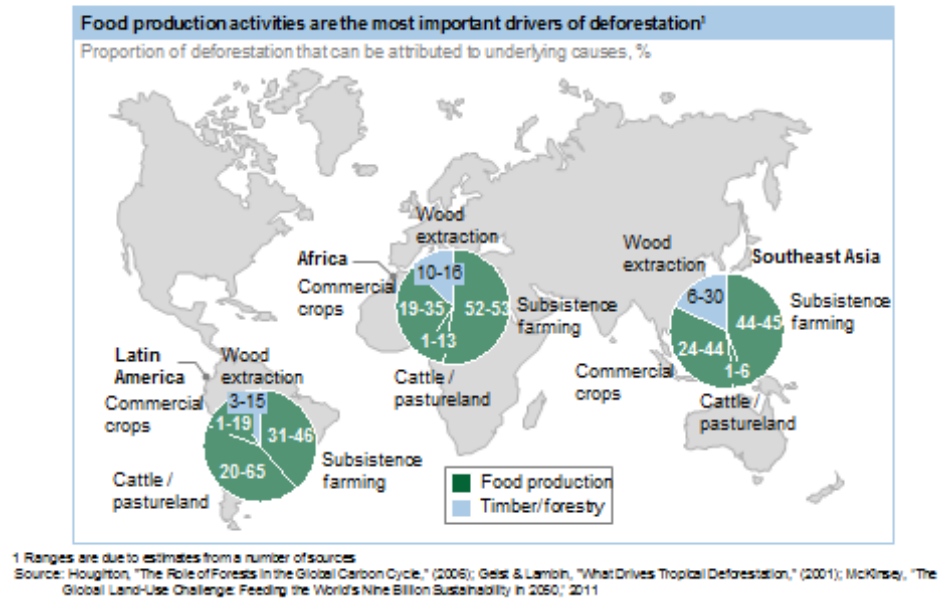
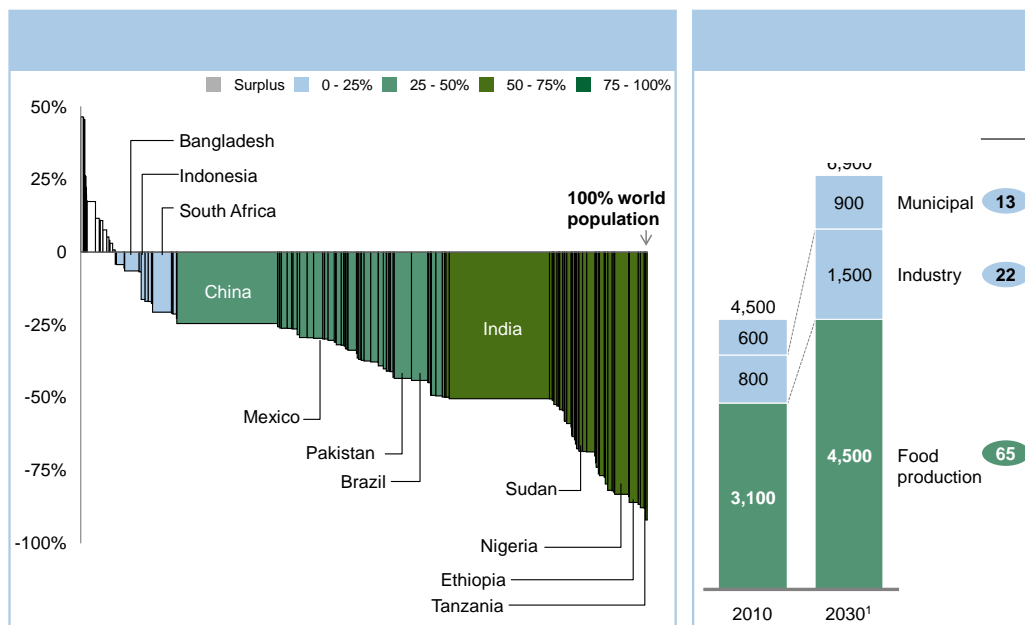


Exhibit 11

By 2030, many countries are expected to face severe water shortages, with food production being the major driver of water demand



¹ 2030 projections, assuming technological innovation and infrastructure improvement investments are frozen at 2010 levels

1d Demand model; IFPRI

Alongside food, the building, transport and electric power sectors are also responsible for significant environmental pressures. These sectors are described in detail in Annex III.

The balance between a focus on drivers and pressures

We propose to enhance approaches for tackling drivers, both direct and indirect. We already have some experience in investing in driver-focused interventions. An analysis of Project Information Forms for projects requesting GEF funding in the Fifth Replenishment Period (GEF-5 PIFs) found that 46 percent of the projects, by investment value, that requested GEF funding were focused primarily on drivers, while 54 percent focused primarily on pressures (Annex I).⁴¹

While we aim to increase driver-focused interventions, we still need to tackle immediate environmental pressures. Meanwhile, many systems are at or beyond the safe operating space for humanity, as indicated in the planetary boundaries framework. When globally significant environmental assets in a given location are severely threatened, they will warrant a pressure-focused intervention. We have 20 years of experience applying a menu of options to tackle urgent environmental problems on the ground. Informed by this experience, Exhibit 12 presents examples of cases where selecting a pressure-focused intervention may be a more preferred solution to achieve our global environmental objectives.

Choosing between driver and pressure-focused interventions is not always necessary. In some cases, we can design interventions that tackle both pressures and drivers. Within our current portfolio we have examples of projects that have successfully combined both approaches—notably our biodiversity and protected areas work. For example, the “Establishing Conservation Areas through Landscape Management” project in Cambodia focused on pressures in its protected area investments and drivers in its landscape approach to addressing threats to biodiversity. In other cases, it may make sense to tackle a pressure first, with a follow-on investment that addresses upstream drivers, as we propose with the GEF-6 anti-poaching program in Africa. Our work in the area of POPs—where we are shifting our focus from stockpile reduction to advancing green chemistry—also reflects this approach.

⁴¹Refer to Annex I for methodology used in this analysis.

Exhibit 12

When investing in interventions that directly address environmental pressures may be most effective

PRELIMINARY

FOR DISCUSSION

	Description of context	Examples
1 Asset of global significance	<ul style="list-style-type: none"> Pressure being addressed threatens an environmental asset of global significance 	<ul style="list-style-type: none"> Saving the habitat of the last wild panda, the last pristine coral reef
2 Tipping point	<ul style="list-style-type: none"> Pressure is deemed by multiple leading scientists to be at risk of tipping a major ecosystem or biome into a new state with significant loss of biodiversity and ecosystem services. 	<ul style="list-style-type: none"> Reducing nutrient pollution in a lake with rare aquatic biodiversity that is at risk of becoming eutrophic
3 Necessary precursor to driver intervention	<ul style="list-style-type: none"> Pressure-based approach is a necessary precursor to a high potential drivers-intervention: The pressures intervention is an essential first step in taking on a broader strategy to tackle drivers 	<ul style="list-style-type: none"> Anti-poaching in Africa POPs stockpile reduction shifting to green chemistry
4 Strengthens driver intervention	<ul style="list-style-type: none"> Pressure-based approach is matched with and strengthens drivers-intervention: The pressures intervention is integrated into a broader strategy to tackle drivers 	<ul style="list-style-type: none"> Protection of native forest combined with the restoration of degraded land to meet demand for food

Conclusion

By developing a better understanding of the causal chains of environmental degradation we can design more effective interventions to tackle the drivers of global environmental pressures. An enhanced focus on a drivers-focused approach in our portfolio will enable us to take greater advantage of synergies across programs, improve the cost-effectiveness of our investments, and generate social and economic co-benefits. We will continue to invest in pressure-focused interventions when circumstances necessitate immediate actions in order to protect globally significant environmental assets. We will also seek opportunities to design projects and programs that focus on both environmental drivers and pressures. As we increase our ability to design and implement interventions addressing drivers in coming years, our program staff and partners will build and share that experience broadly through a strengthened knowledge management system.

3. Enhancing Our Impact

As a significant multilateral funding mechanism for the global environment, we have a responsibility to take a leadership role in helping reverse environmental trends, and to protect and enhance ecosystem services. Daunting as it may seem, we must take up this challenge if we are to succeed in realizing the ultimate objectives of the Conventions we serve and our mission of ensuring sustainable use of ecosystems and resources. This will require us to build on our strengths and successes as well as seek new ways to scale up the delivery of global environmental benefits.

We will take a two-pronged approach to enhance our impact:

1. *How we intervene.* We will pick points of intervention in the causal chain—from indirect drivers to changes in the state of the environment—that give us the best chance of delivering scalable global environmental benefits across our programs. For the identified intervention points we will need to identify the key barriers to action and apply influencing models that overcome these barriers.
2. *How to reach scale.* In selecting the intervention points and influencing models, the overriding consideration will be the delivery of scalable global environmental benefits across our programs. This entails selecting interventions that themselves have the potential to generate significant environmental benefits and applying these interventions in ways that increase their likelihood of being scaled through broader adoption and replication by others.

How we intervene

In order that our interventions are most effective in reducing pressure on the environment across our programs, we must carefully decide *how* we intervene. There are three parts to this: (i) selecting points of intervention in the causal chains of the most important drivers of environmental degradation; (ii) identifying the key barriers that prevent diverse actors from acting in the interest of the global environment; and (iii) choosing what influencing models to use to overcome those barriers.

(i) Which points of intervention in the causal chain?

It is necessary to identify the points in the causal chain for sectors, sub-sectors, industries or products where our interventions can have the highest impact across our programs. To illustrate, we have conducted a preliminary analysis for the food sector (Exhibit 13). This indicates that the production of five food commodities, in particular, cattle, palm oil, fish, rice and wheat, have created, and are expected to continue to create high pressures on natural habitats, water quality and quantity, and greenhouse gas emissions. Similar analysis can be conducted for other sectors such as buildings, transport, and electric power in order to effectively target our interventions where we have the best potential to deliver significant and scalable global environmental benefits.

Exhibit 13

Five commodities drive significant environmental pressures across our programs

	Environmental pressure ¹²				
	Land-use	Water use	CO ₂	Land degradation and water pollution	Land and ocean biodiversity
	Hectares affected in 2030/size of habitat impacted by 2030	Km ³ withdrawals in 2030	tCO ₂ e in 2030 (includes direct factors such as deforestation, as well as indirect, such as fertilizer)	Qualitative assessment (expert interviews)	Qualitative assessment (expert interviews)
Cattle	High	High	High	Moderate	High
Palm oil	Moderate	Low	High	Moderate	High
Fish	High	Moderate	Low	High	Moderate
Rice	Moderate	High	High	Moderate	Low
Wheat	Moderate	High	High	Moderate	Moderate
Biomass	Moderate	High	Moderate	Moderate	Moderate
Corn	Moderate	High	Moderate	Moderate	Moderate
Soy	Moderate	Low	Moderate	Moderate	Low
Sugarcane	Low	Moderate	Low	Moderate	Moderate

1 The order of magnitude of pressure determines whether it is categorized as low, medium, or high. Impacts categorized as high tend to be >5 times as strong as one classified as medium, which tend to be >5 times as strong as ones categorized as low impact.

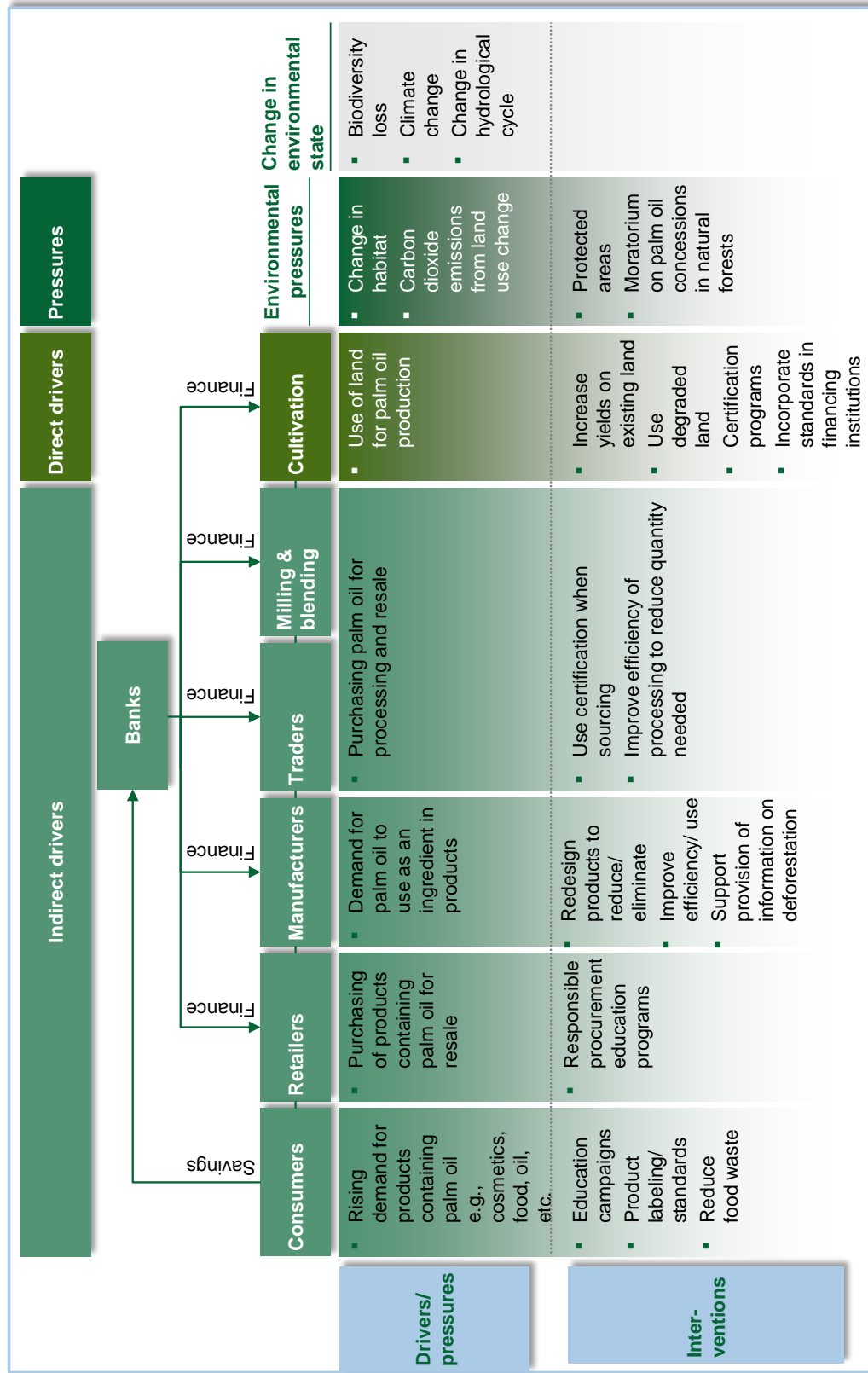
2 Results are similar whether considering pressures today or projections for 2030.

Source: Team analysis

When feasible, choosing interventions further up in the causal chain will enable us to have a broader and systemic impact on global environmental benefits, because of the potential for cascading downstream benefits, as noted earlier in Chapter 2. Exhibit 14 illustrates different causal chain interventions that can be made for stemming deforestation from one of the five commodities identified above — palm oil. Similar illustrations of causal chain interventions for urban development, vehicles, and coal-fired electricity generation are included in Annex III.

Food sector: palm oil causal chain

ILLUSTRATIVE
NOT EXHAUSTIVE



Source: Team analysis

ii) Which barriers to tackle?

For the driver causal chains that we chose to focus on, we will need to tackle barriers that prevent actors in the chain from taking actions that align with the objectives of our programs. There are five common barriers that prevent actions that support environmental objectives. While this list of barriers is not intended to be exhaustive, it provides a guidepost to define a suite of influencing models capable of tackling them. However, it is not intended to substitute for an intervention-specific analysis. Each of these five barriers is described below with examples.

Policy. Existing policies and regulations often do not consider environmental objectives. This may be because there is lack of knowledge about the real costs or benefits related to environmental goods and harms, because the institutional capacity to develop robust policy is limited, or because constituencies with entrenched interests prevent politicians from acting.

Awareness and behavior. Other actors may also have limited appreciation for how their actions influence the environment. For example, farmers may not realize the degree to which agricultural practices that accelerate erosion are contributing to their declining yields, or investors in the electric power sector may not realize the level of liability their assets are exposed to as a result of water risks. In other cases where actors may be aware of the real costs and benefits of their actions, they may not have the capacity or skill to change. For example, a national utility may lack the technical capacity to augment the supply of intermittent renewable electricity to the electrical grid.

Finance. Limited or no access to finance, or high cost of capital resulting from perceived risks prevents the uptake of a new technology or practices. For example, although an investment in a new green chemistry manufacturing equipment may be otherwise financially sound, because it is a new technology financiers may raise the capital costs thus holding chemical manufacturers back from switching to the more sustainable alternative.

Technology. Technologies to help deliver environmental objectives are not yet commercially viable, or are not yet developed. For example, while plug-in electric vehicles may present a low-carbon transport solution in areas with a clean electric power supply, technological gaps remain in developing commercially viable vehicles that are more cost-competitive with existing transportation options.

Coordination. Narrow or overlapping mandates can compound policy barriers. For example, a forest ministry may aim to protect forest by seeking to ban development in a given forest area, while an energy ministry may aim to reduce greenhouse gas emissions by developing a new wind power project in the same high-resource forested area. Alternatively, overlapping mandates may result in a lack of coordination, with confusion arising around which actor is responsible for addressing a particular issue, leading to a lack of accountability.

(iii) What choice of influencing models to overcome the identified barriers?

Influencing models need to be matched to the barriers they intend to overcome. In practice there may be multiple barriers requiring the application of different influencing models and careful sequencing over time. For example, trying to implement new policies is unlikely to work if there is a lack of political will or institutional capacity. Looking back at our greatest successes over the past two decades, we have identified a set of five complementary influencing models capable of tackling the common barriers we see in practice

Transforming policy and regulatory environments. This model helps governments put in place the policies, regulations and institutions that can change their own investment and spending practices. It also gives individuals and companies operating at various levels – local, national, multinational – the signal or incentive to change their consumption and production choices. This model can more effectively be targeted at scales that deliver greater benefits for the global environment. Such signals/incentives need to be clear, predictable, and transparent in order to enable private sector actors to make optimal decisions. Historically, our use of this influencing model has been successful, given our close partnerships with governments. With our support, for example, the Chinese government put in place new policy and regulatory frameworks in their renewable energy market, which helped create enabling conditions that resulted in a 100-fold increase in installed wind capacity in six years.

Demonstrating innovative approaches. This influencing model aims to support the demonstration of a technology or approach, with the aim of helping unlock the market for a greener technology or create a beacon effect for the replication of the target technology or approach. This approach may involve placing high-risk bets on promising new technologies or approaches, in the hope that some will emerge as “game changers” and have a “beacon effect” spurring adoption elsewhere. However, in practice, successful demonstrations also require clear strategies for scaling them. For example, we provided funding to demonstrate new ways to treat ballast water to eliminate invasive species that were broadly adopted by the global shipping industry. Such broader adoption was made possible because we provided sustained support over a decade and combined it with approaches to foster a global industry alliance together with our implementing partner.

Strengthening institutional capacity and decision-making processes. This model aims to support and strengthen institutions, improve information, participation, and accountability in public and private decisions that have a significant impact on the environment. The provision of technical assistance to an electricity regulator or utility on how to better integrate renewable energy into their grid infrastructure would fall under this category. Providing better information to consumers around the impacts of global commodity chains on deforestation would be another example.

Convening multi-stakeholder alliances. This model can take a variety of forms to address global environmental challenges, and can often be used to support other influencing models, such as championing new policies and scaling up demonstration models. It can create change through the power of peer pressure within and across sectors, with leading domestic and multinational companies committing to new standards, inducing other companies to follow suit. En.lighten provides a successful example of this model. Generally, there are few examples of voluntary standards leading to global-scale benefits on their own. Such broad-scale benefits typically arise

when voluntary standards are formalized and turned into mandatory requirements through policies and regulations; in this sense, a voluntary standard can be thought of as a type of demonstration approach for establishing mandatory standards.

De-risking and incrementally financing investments. This model helps cover risks or investment gaps that investors who are more oriented towards financial returns or local development benefits would not have the incentive to cover. Such investments have the potential to leverage private sector investments. Our interventions could help shift such investments by taking risk positions within capital and/or financing structures. For example, with the project on China Utility Energy Efficiency, we have provided funds to de-risk large volume IFC loan-guarantees to help unlock energy efficiency lending from commercial banks in China, resulting in replication of an effective energy efficiency lending model across the country.

Together, these influencing models can help address multiple barriers. Transforming policy and regulatory environments, strengthening institutional capacity and decision making processes, and convening multi-stakeholder alliances can address several barriers. Exhibit 15 illustrates how different influencing models can tackle multiple barriers.

Evidence from previous interventions suggests that some influencing models may be better at driving broader adoption. A recent Evaluation Office analysis found that 47 percent of interventions that focused on supporting policies, laws, and regulations resulted in broader adoption.^{42,43}

No single influencing model is likely to be capable of addressing the multitude of barriers that are often present in any causal chain of environmental degradation. Thus, we will need to combine and sequence the use of different influencing models based on careful diagnosis of the barriers that are present.

⁴² From GEF Evaluation Office presentation “Progress Report on OPS-5: Impact Issues” at the Interagency Meeting, Thursday, August 22, 2013.

⁴³ The 2013 GEF Evaluation Office document *OPS5 Technical Document #2: Impact of the GEF* describes broader adoption thusly: “While in specific contexts, some GEF-supported initiatives may already result in environmental stress reduction and improved environmental status by project end, in most cases, the successful, widespread implementation of similar interventions is critical to reach global environmental benefits. Broader adoption pertains to such transformational processes.”

Exhibit 15

Influencing models addressing multiple barriers: examples for the food sector

ILLUSTRATIVE

	Example of Barriers addressed	Example of intervention in the food sector
Transforming policy & regulatory environments	<ul style="list-style-type: none"> Policy challenges Narrow / overlapping mandates among ag., forest and env. ministries 	<ul style="list-style-type: none"> ✓ Land use zoning changes support use of degraded land for agriculture, taking pressure off natural forests
Demonstrating innovative approaches	<ul style="list-style-type: none"> Awareness & behavioural gaps Technology challenges 	<ul style="list-style-type: none"> ✓ Create “champion clubs” that bring attention to change agents from the field Innovation prizes that reward creative solutions
Strengthening institutional capacity & decision- making processes	<ul style="list-style-type: none"> Awareness & behavioural gaps Policy challenges 	<ul style="list-style-type: none"> ✓ Build capacity to implement traceability in supply chain
Convening multi- stakeholder alliances	<ul style="list-style-type: none"> Awareness & behavioural gaps Policy challenges Narrow / overlapping mandates 	<ul style="list-style-type: none"> ✓ Convene major retailers, food manufacturer NGOs, and certification bodies to set standards on best practice certification
De-risking & incrementally financing investments	<ul style="list-style-type: none"> Technology challenges Capital failures 	<ul style="list-style-type: none"> ✓ Create revolving investment fund with development agencies to fund small holder development of degraded lands as an environmental and poverty reduction effort

While we have had some successes using a mix of these influencing models, they have not always been applied in a way that is scalable beyond the intervention itself. For instance, several of our climate change interventions target sectors that drive GHG emissions, for example building chillers, but employed a narrow technology or single demonstration focus without a clear scaling strategy. While often successful in its own right, these interventions focused narrowly on one sub-sector in just one country. Thus, a focus on designing and implementing the influencing models with scalability in mind is just as important as the choice of influencing models.

Combining drivers and pressure interventions in the causal chain with influencing models creates a menu of intervention options. Exhibit 16, for example, provides an illustrative menu of possible interventions for tackling commodity-driven deforestation.

Exhibit 16

Influencing models: interventions across the causal chain – deforestation example

ILLUSTRATIVE

Influencing Model	Indirect drivers	Direct drivers	Pressures
Transforming policy & regulatory environments	<ul style="list-style-type: none"> Include requirement for certification in public procurement policies 	<ul style="list-style-type: none"> Participatory land use planning Restoration policies for degraded land 	<ul style="list-style-type: none"> Institute a moratorium on old growth forest conversion
Demonstrating innovative approaches	<ul style="list-style-type: none"> Consumer campaign on use of substitutes with lower water footprint 	<ul style="list-style-type: none"> Demonstrate use of lower water impact ingredients in food manufacturing 	<ul style="list-style-type: none"> Limit use of water for irrigation in water scarce areas
Strengthening institutional capacity & decision-making processes	<ul style="list-style-type: none"> Build government capacity on traceability in supply chains 	<ul style="list-style-type: none"> Support public participation in land use planning 	<ul style="list-style-type: none"> Develop environmental tribunals for citizens impacted negatively by deforestation
Convening multi-stakeholder alliances	<ul style="list-style-type: none"> Create consumer education campaigns with health sector to reduce meat consumption 	<ul style="list-style-type: none"> Educate small holders on benefits of certification 	<ul style="list-style-type: none"> Agree voluntary “no go areas” with private sector
De-risking & incrementally financing investments	<ul style="list-style-type: none"> TBD 	<ul style="list-style-type: none"> Finance yields improvement measures 	<ul style="list-style-type: none"> TBD

How to reach scale

As we have a limited investment budget relative to the size of environmental challenges, we must be catalytic. It is, therefore, essential that we select and apply interventions with a view to generating scalable global environmental benefits across our programs.

The scale of our interventions in terms of their ability to deliver global environmental benefits can be considered in two dimensions: scale – the global environmental benefits that directly flow from our interventions; and scalability – the global environmental benefits that result from our interventions being scaled up by others. Scale and scalability can be considered along three axes – across multiple geographies, across multiple sectors, and over time. Design for scale and scalability need to be front and center in each of the selection steps of what we target and how we intervene.

We will focus on designing interventions with explicit scaling strategies to increase the chances of replication or broader adoption by others. A preliminary analysis by the GEF Evaluation Office of the climate change mitigation impact of 18 GEF projects in emerging economies identified scaling, or “acceleration,” as a very important way in which GEF could contribute to significant GHG reductions.⁴⁴ The indirect impacts of projects after their completion were orders of magnitude greater than those achieved by the initial GEF intervention.

We have had some success designing our investments to be both at scale and scalable, but there is room for improvement. An analysis of 98 randomly selected GEF-5 Project Information Forms (PIFs), which outline proposed project interventions, objectives, and requested funding amounts, reveal that projects representing only 32 percent of requested investment, by value, is designed at scale or to have a scalable impact in terms of delivering global environmental benefits. This assessment was based on whether an intervention was designed to: (a) cover multiple geographical areas or be scalable to other geographies (to at least the national level) and/or (b) cut across multiple sectors.⁴⁵ This may partly explain why the Evaluation Office found that only 15 percent of completed projects had achieved high levels of broader adoption.⁴⁶ We have not been systematically designing interventions to deliver cross-cutting global environmental benefits at scale. Even our influencing models can only be at scale or have a scalable effect if they are explicitly designed to be so.

In addition, a qualitative analysis of a sample of 10 completed projects with terminal evaluation reviews helps provide an illustration of the differences between projects that address pressures and / or drivers, the use of different influencing models, and whether projects achieve scale or are scalable (Annex I).

Combining driver-focused interventions with explicit scaling strategies

We need to focus more sharply on scalability. The drivers-focused investments requested for GEF-5 were found to be more likely to be at scale or scalable than the pressure-focused

⁴⁴ Zazueta, Aaron and Christine Wörten, GEF Evaluation Office. “GEF Climate Change Mitigation Impact Evaluation Preliminary Findings”, presented at Interagency Meeting, August 22, 2013

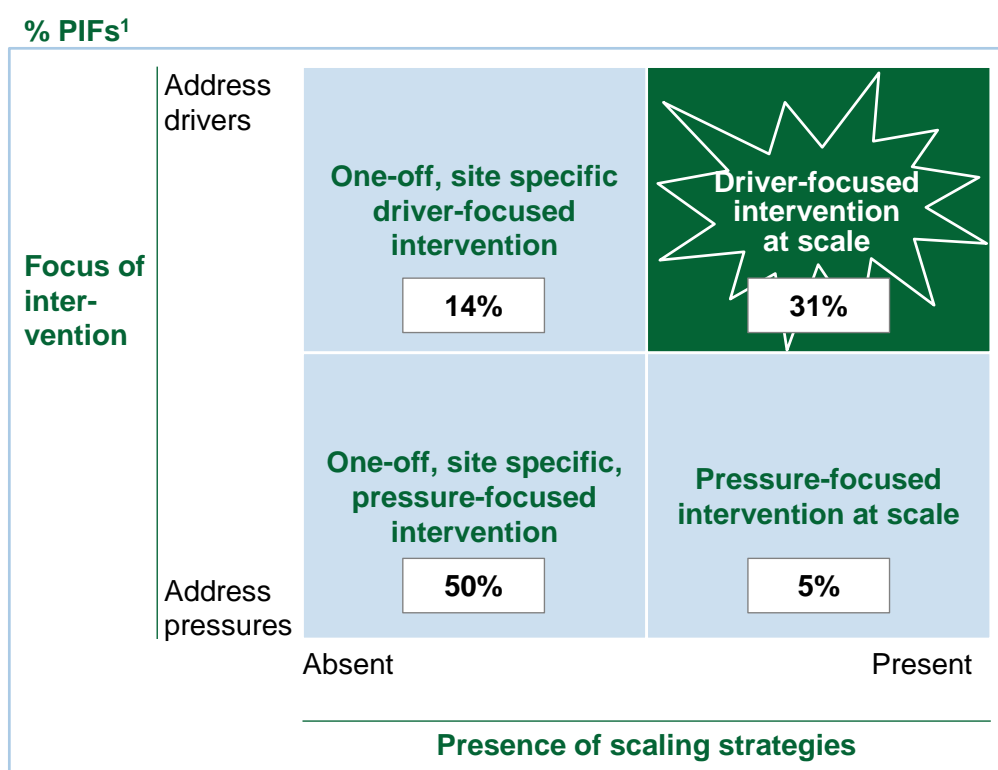
⁴⁵ Please see Annex I for methodology.

⁴⁶ van den Berg. GEF Evaluation Office. “Progress Report on OPS-5: Impact Issues” at the Interagency Meeting, Thursday, August 22, 2013.

interventions. An analysis of PIFs, disaggregated by drivers and pressures, found that of those that targeted drivers (46 percent of our investments, by value), over two-thirds was designed to be at scale or scalable. In contrast, of the 54 percent of our investment that targeted pressures, only 8 percent were designed to be at scale or scalable. As a result, half of approved investment in GEF-5 did not address drivers *and* was not designed to deliver scalable global environmental benefits (Exhibit 17). This analysis also suggests that projects that target drivers tend to have more well-defined scaling strategies for generating environmental benefits beyond the specific project intervention, than interventions that target pressures.

Exhibit 17

Design of GEF-5 PIFs point to the need for stronger focus on scalability



¹ 98 PIFs were analyzed out of a total of 572 GEF-5 PIFs. PIFs were selected randomly and proportionately across focal areas and GEF-5 years. Percentage is volume of requested investment, not number of PIFs.

Source: Team analysis

Conclusion

Our two-pronged approach helps us select interventions capable of delivering significant and scalable benefits across our programs. In the past, we have had successes designing interventions that delivered benefits through the scale of our specific intervention, as well as its scalability through broader adoption by others. We need to increase the share of these successful interventions in our portfolio. We can do this by making scale and scalability explicit considerations throughout the project selection process. As we feed our project design, implementation and evaluation experience into our results and knowledge management systems, we can close the feedback loop and improve our own decision-making as well as our networks.

4. The Path Forward

There are two critical principles for the GEF2020, namely, addressing the drivers of global environmental degradation and applying influencing models in ways that deliver global environmental benefits at scale. These principles need to be translated into practical operational steps. There are four aspects of our operational framework that are particularly important in this regard. First is the question about what activities our programming specifically will focus on. The second question concerns how GEF resources are allocated. The third concerns how the GEF partnership can be optimized. And finally, fourth, how we can ensure that the entire partnership constantly learns from accumulated experiences and maintains a sharp focus on results. We intend to take the first steps forward across these areas during GEF6, subject to replenishment negotiations, which are ongoing in parallel.

Focus of programing

Enhancing our impact in order to deliver the best possible outcomes for the multilateral environmental conventions for which the GEF is the/a financial mechanism, requires us to become more targeted in what we invest in. We must invest the resources entrusted to the GEF in programs and projects that can deliver results at scale across our target global environmental areas – biodiversity, chemicals, climate change, land degradation, forests, and international waters. Building on our past successes, the proposed GEF-6 programming strategy incorporates elements of the GEF2020 strategy as summarized below. This includes the introduction of more driver-focused approaches that use a narrower set of the most effective influencing models, and a proposal to pilot an integrated approach to programing through five signature programs (see Box).

- *Biodiversity.* The proposed GEF-6 biodiversity strategy will tackle the three principal causes of biodiversity loss and ecosystem degradation—habitat loss, overexploitation, and invasive alien species. These causes are further exacerbated by climate change. This will enable GEF to best exploit the intersection of GEF’s mandate and the Convention on Biological Diversity Strategic Plan and the associated Aichi Targets, and will ensure that GEF investments deliver impact at scale while delivering global environmental benefits. The strategy recognizes that effectively managed protected area systems combined with a drivers approach to address external threats can make a significant contribution to achieving many of the Aichi Targets. Development and resource use external to the protected area estate often degrades biodiversity and ecosystem goods and services. Targeted threat reduction, such as promoting the sustainable use of ecosystems, can address this dynamic and help secure the protected areas themselves while contributing to the sustainable management and climate-resilience of the surrounding landscapes and seascapes. Critically, however, the societal failure to adequately price the economic value of biodiversity and the ecosystem services it provides has undermined the long-term sustainability of attempts to mainstream biodiversity, which have often focused too narrowly on the mitigation of environmental pressures and palliative attempts to offset biodiversity loss. Hence, GEF’s support to biodiversity mainstreaming actions that address the drivers of biodiversity loss is paramount.

- *Climate Change Mitigation.* The GEF Climate Change Mitigation focal area addresses the key drivers of climate change through the reduction of the main sources of GHG emissions, including a focus on land use change. The major indirect driver of GHG emissions is from energy demand; second to that are the direct drivers in the forestry and agricultural sectors. A growing concern is short-lived climate forcers, such as black carbon and methane. These issues are addressed in the proposed GEF-6 Strategy. To address the drivers of climate change more effectively, the proposed GEF-6 Climate Change Mitigation Strategy places an emphasis on synergistic initiatives that cut across GEF focal areas, in order to maximize the delivery of global environmental benefits. For instance, the GEF will support, through the proposed Signature Programs, sustainable cities and food security/climate smart agriculture to address unsustainable consumption in an integrated manner. The GEF will also continue to support projects that combine changes in policies, technology development and transfer, and the development of financing instruments.

- *Land Degradation.* Land degradation due to desertification and deforestation is a major factor in the progressive deterioration of ecosystem services affecting agro-ecosystems and forest landscapes globally. Unsustainable land use practices (especially by poor farmers and herders lacking alternative livelihoods), and inadequate or ineffective land use policies are the major drivers of land degradation. These drivers are in turn influenced by socioeconomic trends, such as population growth, growing demand for agricultural commodities, and human induced climate change. Agricultural, rangeland, and forest landscapes affected by desertification and deforestation ultimately become unproductive. Severely degraded land areas can no longer sustain production, and the economic cost of restoring such lands can be prohibitive. As a result, new areas are continuously opening up for agriculture and grazing use in order to meet growing demands, with implications for our other global environmental commons, including freshwater, biodiversity, and climate. The GEF approach focuses on land management practices through advancing policies as a means of arresting or reversing land degradation, specifically desertification and deforestation.

- *International Waters:* This Focal Area has been tackling coordination barriers identified in Chapter 3, by helping countries to jointly manage their transboundary surface water basins, groundwater basins, and coastal and marine systems. Going forward, we will strengthen the delivery of environmental and socio-economic benefits in transboundary water bodies – freshwaters and oceans- by targeting drivers of increasing water demand and the degradation of water quality and ecosystems. This will be done by convening multi-stakeholder alliances to foster multi-state cooperation on transboundary water resources; enhancing institutional capacity and decision making at regional and national levels and by supporting strategic investments for integrated transboundary water resources management approaches. Targeted interventions will include promoting conjunctive management of surface and groundwater, addressing land-based drivers of coastal and marine ecosystem degradation, scaling-up of sustainable fisheries management practices, and rebuilding and restoring degraded ecosystems, where it is cost effective. These approaches will address direct drivers of international water degradation and employ influencing models that aim to tackle barriers that will yield impacts at scale.

- *Chemicals.* The demand for chemicals is driven by the demand for consumer products, food production, building materials and other sectors. The majority of chemicals when used properly are safe to human health and the environment. In other words, the unsafe production and use of chemicals is identified as a direct driver of environmental pollution. In particular, persistent organic pollutants (POPs), which threaten human health and the environment on a global scale, are a particular concern. The GEF Chemicals Focal Area has adopted a mix of pressure-focused and driver-focused approaches so far. The former has been necessary to urgently reduce existing stockpiles and to clean up contaminated areas of POPs, mercury, and chemicals of global concern. In parallel, we are focusing on the direct drivers by reducing the use of POPs and mercury in production and supply chains through, for example, the deployment of alternatives to harmful chemicals. The phase-out of ozone depleting substances such as hydrochlorofluorocarbons (HCFCs) is an example of a driver-focused intervention too. Moreover, given the continuous increase in the global demand for new chemicals, the GEF-6 strategy proposes to work more upstream in the causal chain focusing on research and development of chemicals and manufacturing of chemicals and products.
- *Sustainable Forest Management.* The drivers of forest loss and degradation are deeply rooted in institutional and market problems that cannot be solved by taking a purely a forest perspective. The expansion of agriculture is the main driver of forest loss worldwides. The actors involved range from small scale farmers to large companies. Other drivers of deforestation include expansion of infrastructure, mining, and illegal logging. Forest degradation, in contrast, often has different driving forces, including unsustainable and illegal logging, over-harvest of fuelwood and non-timber forest products, overgrazing, human-induced fires, and poor management of shifting cultivation. Poor forest governance, unsustainable natural resource planning, high levels of corruption, low capacity of public forestry agencies and land tenure uncertainties often exacerbate the pressures to create a situation where further loss and degrading of forests is inevitable without fundamental change to both the direct and indirect causes. Our Sustainable Forest Management Program is built on four strategic priorities: (i) Maintaining forest resources by addressing the drivers of deforestation to reduce the pressures on high conservation value forests (ii) Enhancing forest management to maintain flows of forest ecosystem services and improve resilience to climate change through sustainable forest management; (iii) Reversing the loss of ecosystem services within degraded forest landscapes; and (iv) increasing regional and global cooperation to maintain forest resources, enhance forest management and restore forest ecosystems through the transfer of international experience and know-how.

An innovative element in the proposed programing for GEF-6 is a set of five Signature Programs, focusing on taking deforestation out of global commodity supply chains; creating a new development path for the Amazon Basin; rebuilding global fisheries, improving food security in Africa; and developing sustainable cities (Box: Proposed Signature Programs in GEF-6). The Signature Programs are explicitly designed to address key drivers of environmental degradation at global and regional scales. They seek to capture time bound opportunities to avoid degradation of ecosystems beyond a tipping point or before reversing damage become too costly. The Signature Programs also explicitly seek to improve synergies across GEF's programing areas to have sustained impacts at scale. They seek to strengthen existing programing by creating more room for transboundary, regional and global scale intervention, and convene key stakeholders around common platforms, including seeking new

ways to engage the private sector. In addition, the Signature Programs are designed to enhance learning and knowledge sharing for maximum impact. Finally, they are designed to support the evolving post-2015 development agenda.

Box – Proposed Signature Programs in GEF-6

Taking deforestation out of global supply chains. Global consumption of agricultural food and fiber commodities is an important driver of deforestation. As consumption of these commodities rises the impact on forest resources will be even more severe. Production of beef, soy, oil palm, and pulp paper is responsible for around half of the annual deforestation of primary tropical forests. In addition to species and habitat loss deforestation for these crops generates about half as many greenhouse gas emissions as all transportation globally each year. The program objective is to take deforestation out of the supply chains of these critical commodities by supporting action with producers, buyers, financial institutions, and national governments who are committed to this overall goal. Activities are geared to produce results on the ground by sending clear market signals to reward primary producers who improve their performance and eliminate deforestation.

A New Development Path for the Amazon Basin. The Amazon Signature Program (ASP) will address the drivers of forest cover and habitat change through the promotion of economic development alternative that rely on proper valuation of natural resources, including sustainable forest management that can help reduce poverty and stabilize the agriculture frontier. Global environmental benefits will be considered from a more holistic perspective as the Program will help secure the Amazon basin's function in maintaining climatic and ecosystem stability nationally, regionally, and globally while sustaining these benefits over the medium to long-term. Finally, the ASP will build on the increasing trend of regional integration and identify, codify, and disseminate best practices and policy options to regulate and manage extractive industries, the development of infrastructure, and other common drivers of deforestation.

Rebuilding Global Fisheries. A confluence of drivers, including overfishing and unsustainable practices, increased global consumption of fish products, market failures around open-access resources and ineffective regulation and enforcement are threatening of the sustainability of global fisheries. The Fisheries Signature Program will provide support for a network of expert organizations to jump-start demonstration sites across a number of countries and fisheries types, as a key component of a global partnership to restore ocean health. The Program will stimulate national uptake and replication of successful management methods by establish incentives for adoption of new practices by the fisheries community and working backwards through the supply-chain.

Food Security: Fostering Sustainability and Resilience of Production Systems in Africa. The productivity of smallholder agriculture in Africa, which account for more than 70% of total agricultural production in sub-Saharan Africa, is very low causing major food insecurity issues. A key driver of the low productivity is soil nutrient depletion/mining due to removal with crops, land use change, and effects of climate change and variability. The impact of these drivers are further exacerbated many places in Africa high poverty levels which, due to lack of investments and exposure to improved farming techniques, exploitation of natural capital represents the only means of sustaining livelihoods. Smallholder farmers' most valuable asset is their natural resource, but the asset is often being depreciated as soil health is being compromised. The Signature Program will catalyze investments in options for soil and water conservation, diversification of production systems, integrated management of natural resources, and supportive policies and institutional frameworks. As a result, the GEF will contribute toward ensuring that the African Green Revolution does not undermine the planet's life support systems.

Sustainable cities. Urbanization in developing countries is occurring at an unprecedented rate, and is one of the mega-trends that affect the global environment. The Sustainable Cities Signature Program seeks to foster the development and demonstration of innovative models of cleaner, more efficient, resilient, and prosperous cities with positive impacts on the global environment. The urban demand for energy, housing, infrastructure, natural resources, land, and other urban services can be supported by facilitating integrated planning and management frameworks, thus contributing to a green economy while leveraging local benefits. The Program will be based on an overarching integrated platform, with models of sustainable cities at different stages of development, with a common set of indicators is adopted and/or adapted in different partner institutions.

Allocation of Resources

We need to allocate the resources at our disposal optimally, to scale up our impact and more effectively respond to cross-cutting challenges and deliver global environmental benefits across our programming areas. Our resource allocation system, System for the Transparent Allocation of Resources (STAR), is designed to enhance predictability of resources and the ownership of recipient countries and serves its purpose well. At the same time, this system, together with focal area compartmentalization, makes our resources distributed too thinly. The average size of each project we invested in is often small thus spreading our resources too thin. This reduces our ability to effectively address drivers that transcend countries, scale up impacts, achieve synergies and ultimately deliver on our mission. We will continue to explore with donors and recipient countries the best possible ways to allocate resources.

Role of Partners

Partnerships are a critical part of the GEF's operating model. A more driver-focused approach requires a reinvigorated GEF partnership in order for us to create the necessary platforms that can bring relevant stakeholders to the table. We rely on our partners to source and implement initiatives, allowing our work to have true impact. Key partners—our recipient countries, our implementing agencies, civil society organizations and the private sector—are particularly critical to bringing the expertise and implementing actions against the drivers of environmental degradation. Strengthening the engagement of partners will be important for successful implementation of GEF2020. We will also attempt to seek out new partners where needed to achieve our goals more effectively.

- *Recipient countries:* We will support focal points in our recipient countries to mobilize their peer agencies, nationally and sub-nationally, as well as private sector and civil society stakeholders operating in key sectors, and seek to support more cross-country partnerships, regionally and globally, as well as partnerships based on ecosystems. These partnerships will be critical to enhance the drivers-focus of GEF-funded projects and programs, and in selecting the appropriate influencing model. This may include mainstreaming environmental objectives across ministries, such as in the case of the Benguela Current Commission project, which supports three countries to mobilize stakeholders across key sectors – energy and mines, fisheries and transport – to develop a common legal platform. We will also help build environmental considerations into other key ministries' decision-making processes, especially finance, planning, transport, energy and agriculture. We will also convene multi-stakeholder alliances to for our recipient countries to bring CSOs, both national and international, together with the private sector, under a unified platform, such as the one seen in the Amazon Regional Protected Area (ARPA) program.
- *Implementing agencies:* We aim to strengthen our end-to-end relationship with implementing agencies. In order to achieve shared objectives, in particular, to help countries adopt a driver-focused approach and choose appropriate influencing models, we will work more strategically with our implementing partners, including the incoming national and non-governmental partners, to focus on major sectors or geographies. For example, UNDP played an important role in developing an innovative partnership model among major shipping companies by creating Globallast – Global Industry Alliance for Marine Biosecurity – to combat invasive marine species. Furthermore, we also hope to improve our monitoring, evaluation and reporting procedures.

- *Civil society organizations (CSOs) & academia:* We will work with CSOs in recipient countries and internationally to develop knowledge that will have impact on key drivers and jointly create a platform for actions. In order to enhance our ability to make science-based solutions, we must partner with research institutions and other academic thought leaders. We will strive to incorporate scientific findings into project design, ensuring that we have the highest impact possible.
- *Private sector:* We are actively developing a new framework to mainstream our engagement with the private sector. The private sector offers capital, institutional knowledge and implementation abilities. Through strategic partnerships with key actors, we can tremendously extend our impact and achieve scale. The En.lighten project is a good example of how we can effectively work with the private sector across countries. Through a cohesive institutional strategy on private sector engagement the GEF can magnify its impact by redirecting and increasing the volume of private investment flowing toward sustainable activities. The GEF's comparative advantage relative to other institutions lies in its ability to provide grant funding which can be targeted to provide much needed enabling policy support, among other interventions, that address systemic barriers to private investment. The 2020 private sector engagement strategy will ensure that the private sector is invested in, and contributing to, environmental solutions across GEF's focal areas and signature programs.⁴⁷

Strengthening results management and enhancing the GEF knowledge ecosystem⁴⁸

Results management for the GEF refers to the systems and strategies that help ensure everything we do is in the service of achieving the results we seek. Foremost among these is the achievement of global environmental benefits. Results management must occur throughout the GEF's operational cycle, monitoring and learning from results to inform strategy-setting, project design, implementation and evaluation, with the results again feeding back into this cycle as it begins again. While the GEF has been making efforts to strengthen the results management system, current tools, such as the Annual Monitoring Report, have been limited in their ability to continually inform our investment decisions and those of our partners. In addition, we do not adequately monitor the impact we are having on the global environment, particularly at the portfolio levels. Thus, fundamental changes are needed in our results management systems if we are to improve our effectiveness, and target our scarce resources more strategically. Particular attention needs to be paid to how to measure results of our enhanced focus on drivers, the impacts of selecting the right influencing models, and the results of our efforts to design projects that are at scale or scalable. We will:

- *Measure what matters.* Focusing on a select set of core indicators measured uniformly will result in a more streamlined and effective results management system. It will also help to aggregate indicators at different levels—across countries, regions, programs and institutional portfolios. Choosing the right set of core indicators will strengthen our ability to manage for results. Amongst them will be ones that meaningfully measure how well our

⁴⁷ The main elements of the private sector engagement strategy proposed for GEF6 is attached in Annex II

⁴⁸ For further details, see Annex III **Error! Reference source not found.**

influencing models tackle the drivers of environmental degradation and the barriers to action in order to playing a catalytic role in delivering global environmental benefits that are both at scale and scalable.

- *Close the feedback loop.* A feedback loop that links the lessons learned from our past decisions—from both completed and on-going projects—needs to be strengthened. This feedback loop is critical to inform strategy-setting, the design of future interventions, and changes to projects under implementation. We will seek to enhance monitoring of projects during implementation, in order to make mid-course corrections and ensure rapid feedback that might be useful for the design of new projects. Improving our project management information system in this way will help us become more adaptive. We need to develop a results management system that fosters continuous learning throughout the project cycle. It should enhance understanding about which are the most strategic points of intervention in the causal chain, what barriers we face and the choice or combination of influencing models likely to be most effective, as well as what pathways are likely to ensure that we achieve scalable impact on the global environment. We will work with country and implementing partners to institutionalize processes for communicating feedback, systematizing this process through our project management information system and by redesigning existing tools such as our Annual Monitoring Review to be more relevant to our partners.
- *Demonstrate our impact on the global environment.* We need to improve our ability to tell the story of our impact at the portfolio level. To do this, we need to better understand our impact on the global environment. We will periodically conduct in-depth, *ex-post* analyses of our results to understand the impact of our portfolio by program and across programs. Such analyses will be purpose-built to help our managers and partners design more effective projects and make more strategic investment decisions, helping them ensure that the balance of the portfolio is meeting targets for global environmental benefits or other priority targets.
- *Take our results management system to the next level.* As we enhance the focus in our portfolio on addressing drivers, we will introduce a layer of driver-focused indicators. An illustrative example might be the addition of an indicator on change in sustainable food demand and supply. These indicators will ultimately demonstrate our impact on global environmental pressures of concern to our Conventions. Because drivers tend to affect multiple program areas, these indicators will also help us measure our impact on multiple program goals and improve the potential for realizing synergies across our different programs.

The changes to our results management system will open up potentially game-changing opportunities for us in the future. This may include experimental and quasi-experimental project design – an approach supported by STAP that allows us to much more precisely evaluate and understand the environmental and social effects of project implementation.⁴⁹ Another such opportunity may be results-based financing – a mechanism by which payments are made upon the delivery of measurable and verifiable results.

⁴⁹ Ferraro, P.J. on behalf of STAP. 2011. *Experimental Project Designs in the Global Environment Facility*. STAP advisory document.

Enhancing our knowledge ecosystem as a pathway to scalability

Alongside our results management efforts, effective use of the knowledge that our investments generate will be a key tool as we enhance our focus on drivers and interventions that lead to scalable results. Our knowledge ecosystem consists of our collaborative network of partners, the knowledge we collectively generate, and the ways in which we employ that knowledge become better are designing interventions with a high likelihood of generation significant and scalable environmental benefits across our programs. Enhancing this knowledge ecosystem will enable us to accomplish more than would be possible through direct investments alone. The potential audience for our knowledge products extends well beyond the GEF partnership. Our lessons learned can guide other investments by bilateral funds, major foundations, private sector, and national financial institutions as well as the work of civil society. Thus, we can use knowledge as a lever to mobilize investments in those interventions that have the highest potential to deliver significant global environmental benefits.

To reap the benefits of an enhanced knowledge ecosystem, we will:

- *Develop working knowledge networks.* We will facilitate knowledge networks on specific issues by building on successful models such as IW:Learn, the learning exchange and resource network that promotes experience-sharing and learning among GEF International Waters projects, and the country officials, agencies, and partners who work on them. Our engagement with these knowledge networks will also allow us to harvest knowledge generated from practitioners outside our partnership to feed into our project design. These new knowledge networks will generate knowledge and products targeted practitioners beyond our partnership. In doing so, we can multiply the global environmental benefits we deliver. For example, part of our food security signature program focuses on regreening, agroforestry and sustainable intensification practices in African drylands, where we have identified knowledge sharing between practitioners as an underserved area.
- *Leverage portfolio-level learning.* Our second key knowledge offer will leverage the portfolio-level analysis developed as part of our results management system, and communicate the results externally to support the decisions of other actors operating in this space. The secretariat and implementing agencies will jointly generate and disseminate knowledge on the most scalable and transformational elements of our combined experience, presenting strong evidence on how our interventions have delivered the most benefits.
- *Explore new frontiers for global environmental action.* Our third key knowledge offer is the development of analysis on understudied frontiers of global environmental action. Through such analyses, we will document the future frontiers of environmental change, and will inform global decision-making in these areas. Such research will fill a major knowledge gap, or explore new approaches to addressing our global environmental challenges. For example, such research may focus on the role of cities in the global environment. We will complement, not replicate, the efforts of other institutions on the state of the global environment, such as UNEP's Global Environmental Outlook. We envision building this component over a longer time horizon, and periodically every four years. We will work collaboratively amongst ourselves, particularly the secretariat and the implementing agencies, as well as with leading academic and research institutions.

Together, these components will help us program our resources more effectively, and leverage our partnership, and knowledge to undertake better investments in future that offer us the best chances of achieving impacts at scale across our programs.

Annex I: Analysis of GEF-5 PIFs

A sample of 123 PIFs was selected randomly from the total of 572 Full Size Project and Medium Size Project non-enabling activity PIFs submitted from the beginning of the GEF-5 phase through July, 2013 (5 large PIFs submitted for tranches of funds to be set aside for the Small Grants Program were not included). The sample was selected with a proportional number of PIFs sampled from each year (2010 through 2013). The choice to sample proportionately across years was made to avoid biasing the sample based on too many PIFs from a single year being included by chance, given the likelihood of fundamentally different PIFs being submitted at different stages of the GEF operational phase. Additionally, the sample was selected with a proportional number of PIFs sampled across focal areas to ensure representative distribution. Of this sample of 123 PIFs, 98 were ultimately analyzed. The other 25 were excluded due to their status as a programmatic enabling activities submitted as an MSP or FSP, or due to a lack of available information upon which determinations could be based.

To ensure that the sample selected was not anomalous, we compared to the whole population of 572 GEF-5 PIFs in scope, the initial sample of 123 PIFs has an average deviation of less than 5% across other variables, both by requested investment volume and total number of PIFs:

Average deviation of sample vs. PIF population

Category	# of PIFs	Requested investment volume
Implementing agency	2.7%	2.9%
Region	4.2%	3.5%
Focal area	0.9%	2.7%
GEF project grant (PIF stage)	1.6%	1.9%

Driver-focused or pressure-focused interventions

Part of the purpose this analysis was to determine where the GEF-5 PIFs submitted to date sit on the spectrum of addressing drivers or pressures. Drivers and pressures are defined at length in the framework presented earlier in this chapter. There is a broad spectrum of drivers – from direct to indirect. However, this simplified analysis looks only at whether interventions described in a PIF are primarily focused on drivers or primarily focused on pressures. Nearly one third of the PIFs studied contained an approach that blended elements focused on drivers with elements focused on pressures. For the purposes of this analysis, a judgment was made as to whether the PIF focused primarily on drivers or pressures based on the emphasis in the proposed project design.

Designed with scale in mind

Our definition of scale is also defined at length earlier in this chapter. For the purposes of this analysis, PIFs were deemed to be designed with scale in mind if they:

- *Reached the national (at minimum), regional or global level in the scope of their project influence;*
- *Featured interventions that cut across multiple high-impact sectors within a country or across countries;*
- *Contained an explicit scaling strategy built into the project design intended to scale the intervention across geographies (beyond the national level) or sectors.*

Influencing models

The influencing models in the PIFs were assessed on the basis of the most prominent influencing model presented in the proposed project design, which we classified as the *dominant* influencing model. In some cases, it is difficult to determine from a PIF whether there is any dominant influencing model among several proposed interventions. For the purposes of this analysis, judgments on dominance of an influence model were made by observing the degree of emphasis placed on that influencing model in the proposed project design. While this was also an “all-or-nothing” judgment for the purposes of our analysis, as with the drivers and pressures judgment, there is in reality a spectrum of dominance among the PIFs studied: some feature a single influencing model, and others feature several, where one influencing model is only slightly more dominant than the others. This nuance is not reflected in this analysis, and these results should be viewed with this understanding in mind.

Understanding the results

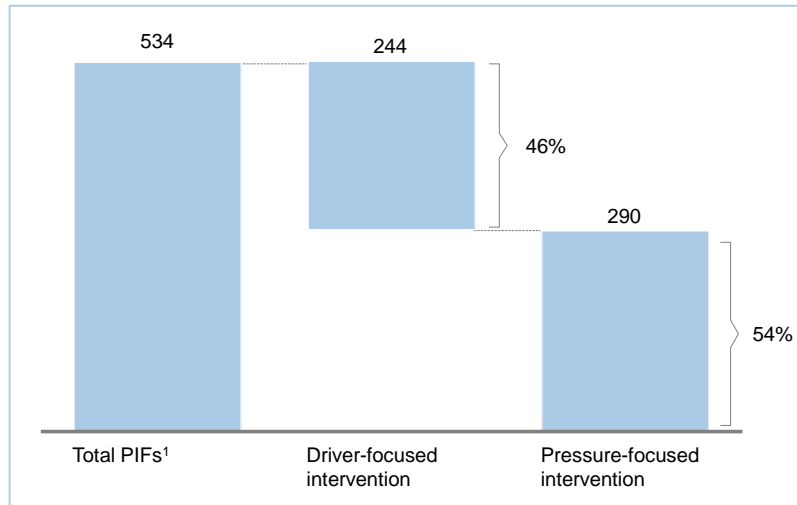
Throughout this section, where a percentage of PIFs is referenced, this refers to the *volume of investment* in the PIFs sampled, rather than the number of PIFs themselves. For example, if it is said that 6% of GEF PIFs were global in geographic scope, this refers to the fact that USD 32.2 million out of \$534.7 million total requested investment in the PIFs analyzed is global in geographic scope, rather than 6 out of 100 PIFs. This simplifies the discussion of the analysis; across all of the results, whether looking at the number of PIFs or the volume of requested investment, the variability is only a few percent.

Some supplementary exhibits from the analysis is shown below.

Exhibit 18

Of GEF-5 PIFs¹, 46 % of investment requested is focused on drivers

US \$ millions requested by GEF-5 PIFs

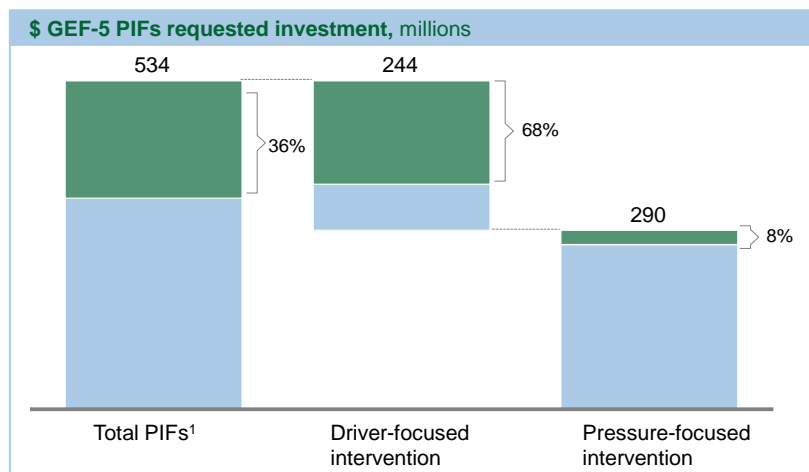


¹ 98 PIFs were analyzed out of a total of 572 GEF-5 PIFs submitted through July 2013. PIFs were selected at random proportionately across focal areas and GEF-5 years, with enabling activities removed

Exhibit 19

68% of driver-focused investments are designed at scale or to be scalable, compared to 8% of pressure-focused investments

■ % of requested investment designed with scaling strategies



¹ 98 PIFs were analyzed out of a total of 572 GEF-5 PIFs submitted through July 2013. PIFs were selected at random proportionately across focal areas and GEF-5 years

Source: Team analysis

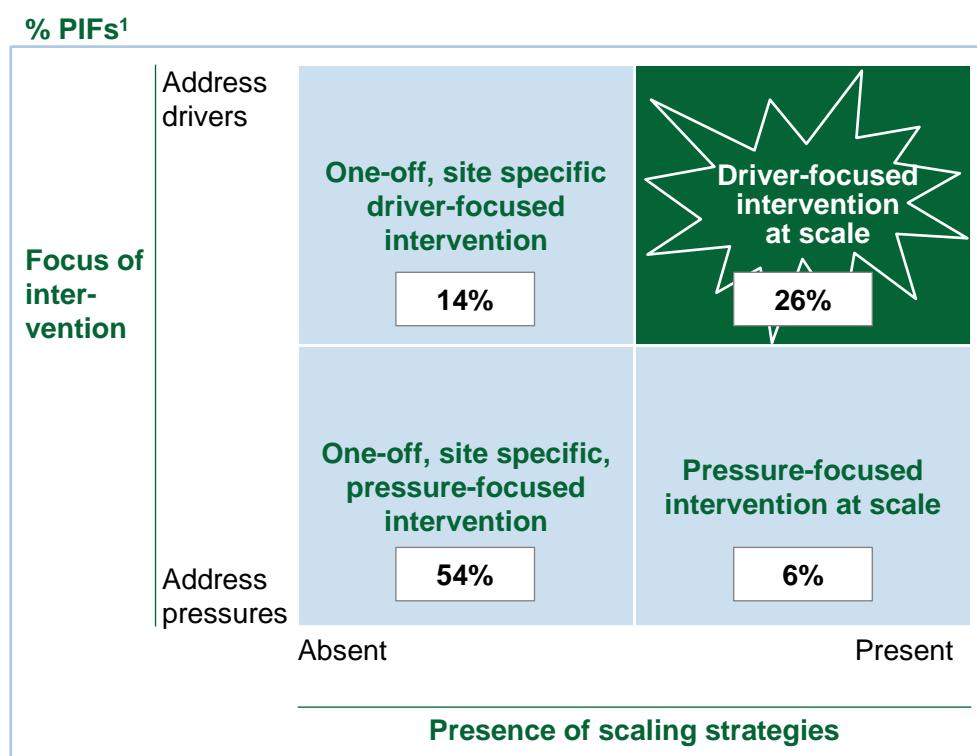
Combining choice of influencing model with explicit scaling strategies

Of our five influencing models, transforming policy and regulatory frameworks is the most commonly used model, accounting for approximately 33 percent of investments requested, by value, relative to other influencing models in the GEF-5 period to date. Further analysis of this subset of GEF-5 PIFs using the transforming policy and regulatory frameworks influencing model revealed that (Exhibit 20).

- It was used to target drivers in projects representing 33 percent of requested investment, by value;
 - By value, they accounted for approximately a third of requested investments deemed to be at scale or scalable in terms of generating global environmental benefits; and,
- Only one-quarter of them were targeted at drivers *as well as* designed at scale or to be scalable

Exhibit 20

“Transforming policy and regulatory frameworks” influencing model needs to be combined with explicit scaling strategies

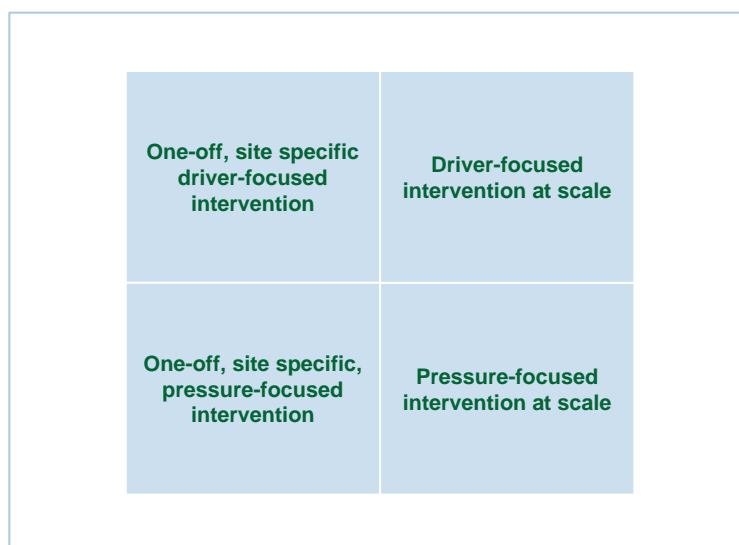


¹ 98 PIFs were analyzed out of a total of 572 GEF-5 PIFs. PIFs were selected randomly and proportionately across focal areas and GEF-5 years. Percentage is volume of requested investment, not number of PIFs.

Source: Team analysis


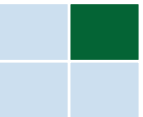
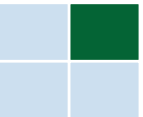
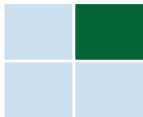
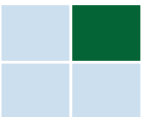
Exhibit 21

Case studies are mapped to where they fit on whether they addressed pressures or drivers, and whether the intervention was at scale / scalable



Case studies: sample project outcomes across pressures/drivers, influencing models, and scale

Mapping	Project	Pressures or drivers?	Influencing model?	Project outcomes at scale?
	<ul style="list-style-type: none"> Sustainable Land Management in Pakistan, Phase I 	<ul style="list-style-type: none"> Attempted to address drivers but faced barriers from lack of existing policy 	<ul style="list-style-type: none"> Transforming policy / regulatory frameworks Demonstrating innovation 	<ul style="list-style-type: none"> Developed 41 village land use plans to help demonstrate sustainable land management, but did not achieve mainstreaming of outcomes at scale
	<ul style="list-style-type: none"> Capacity building for PCB management in Romania 	<ul style="list-style-type: none"> Pressure-focused national clean-up effort 	<ul style="list-style-type: none"> Demonstrating innovation Convening multi-stakeholder alliances 	<ul style="list-style-type: none"> Project succeeded as designed; no scale beyond a single-country, one-time clean-up effort
	<ul style="list-style-type: none"> Integrated land management in Turkmenistan 	<ul style="list-style-type: none"> Addressed mix of pressures and drivers 	<ul style="list-style-type: none"> Demonstrating innovation 	<ul style="list-style-type: none"> Project gains were not mainstreamed and the national policy context for land and water use was not addressed; project design did not emphasize replicability
	<ul style="list-style-type: none"> Establishing Conservation Areas in Cambodia 	<ul style="list-style-type: none"> Addressed mix of pressures and drivers 	<ul style="list-style-type: none"> Demonstrating innovation Strengthening inst'l capacity / decision-making processes 	<ul style="list-style-type: none"> Successful at the local level; did not address issues at landscape level Scaled from local to provincial level but not nationally
	<ul style="list-style-type: none"> Sustainable Land Management in Ghana 	<ul style="list-style-type: none"> Mix of driver and pressure restoration 	<ul style="list-style-type: none"> Demonstrating innovation 	<ul style="list-style-type: none"> Improved agricultural yield as much as six-fold and reduced erosion across 96 demonstration sites, but no reports yet of broader scaling

	<ul style="list-style-type: none"> Biodiversity Conservation in Romania 	<ul style="list-style-type: none"> Very clearly pressure-focused with investment into protected area 	<ul style="list-style-type: none"> Strengthening inst'l capacity / decision-making processes Demonstrating innovation 	<ul style="list-style-type: none"> Achieved scaled certification of protected areas, and achieved replication of management frameworks across a series of planned protected areas , but limited to the national level
	<ul style="list-style-type: none"> Regional marine pollution management in the East Asian Seas 	<ul style="list-style-type: none"> Integrated coastal management addressed drivers 	<ul style="list-style-type: none"> Demonstrating innovation Transforming policy / regulatory frameworks Convening multi-stakeholder alliances 	<ul style="list-style-type: none"> Scaled through a sub-regional partnership across countries Demonstration projects were adopted, then replicated Part of a broader programmatic approach that leveraged synergies
	<ul style="list-style-type: none"> Regional DDT alternatives demonstration in Mexico and Central America 	<ul style="list-style-type: none"> Drivers-focused approach to shift control of malaria vectors away from DDT 	<ul style="list-style-type: none"> Demonstrating innovation Strengthening inst'l capacity / decision-making processes 	<ul style="list-style-type: none"> Lead to multiple national vector control operations moving away from widespread use of DDT
	<ul style="list-style-type: none"> Commercialization of CFC-free Refrigerators in China 	<ul style="list-style-type: none"> Address refrigerator industry by addressing drivers of climate change and ODS 	<ul style="list-style-type: none"> Transforming policy / regulatory frameworks Demonstrating innovation Convening multi-stakeholder alliances 	<ul style="list-style-type: none"> Carefully orchestrated mix of influencing models transformed Chinese refrigerator industry, a globally important, high-impact sector for both ODS and GHG emissions Did not cross into other sectors
	<ul style="list-style-type: none"> GloBallast Water Management 	<ul style="list-style-type: none"> Addresses ballast water transfer, a major driver of marine invasive species 	<ul style="list-style-type: none"> Transforming policy and regulatory frameworks Convening multi-stakeholder alliances 	<ul style="list-style-type: none"> Creation of international convention expected to catalyze more than \$35B in private sector investment over the next 10 years

Annex II: Buildings, Transport and Electric Power as Drivers of Environmental Degradation

Buildings & Transport

Demand for transport and buildings is growing (Exhibit 22), creating major environmental pressures, especially in rapidly growing cities and developing countries. The world population is expected to increase by 2.3 billion, passing from 7.0 billion to 9.3 billion between 2010 and 2050.⁵⁰ Over 50 percent of the world's population now dwells in urban areas, compared to the approximately 35 percent of urban dwellers 50 years ago,⁵¹ and urban population growth will increasingly be concentrated in Asian and African cities.⁵² Migration from rural to urban areas is expected to continue for the foreseeable future.

The future prosperity of urban areas and environmental sustainability are closely linked. The Economist Intelligence Unit estimates -that, in the period 2008-2030, the scale of urban investments will be US \$2.8 trillion in residential real estate, US \$2.1 trillion in infrastructure and US \$8.4 trillion in other productive investments.⁵³ These massive investments will have significant implications for sustainability, and the quality of life and productivity of urban areas is also connected to environmental quality. For example, worsening air pollution, particularly in urban areas, was estimated to have cost the Chinese economy \$112 billion in lost economic productivity in 2005.⁵⁴

Environmental challenges resulting from urban expansion include: climate change, ecosystem degradation, and water quality and quantity challenges. These are summarized below:

- *Climate Change.* A UN report estimates that the world's cities are currently responsible for up to 70 percent of global greenhouse gas emissions, while occupying just 2 percent of land.⁵⁵ Many cities are located in fragile coastal environments, rendering them susceptible to major adverse impacts from storm surges and rising sea levels. Total and per capita CO₂ emissions of cities will primarily be influenced by geographic location, demographics, urban form and density, the urban economy, and the wealth and consumption patterns of urban residents.

⁵⁰ UNDESA, Population Division. 2011. *World Population Prospects, 2010 Revision*.

⁵¹ UN-HABITAT. 2010. *State of the World's Cities, 2010/2011: Cities for All – Bridging the Urban Divide*.

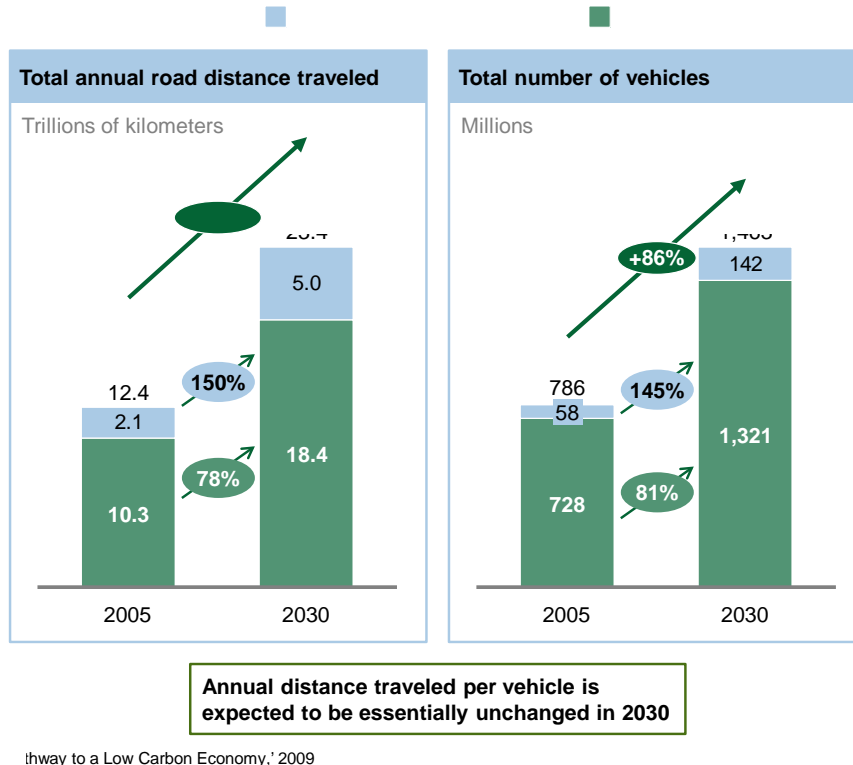
⁵² Asia and Africa are expected to absorb 80% of this urban growth.

⁵³ Economist Intelligence Unit: Global Insight: Oxford Economics: WDI 2012

⁵⁴ Matus, K et al. 2012. "Health damages from air pollution in China," *Global Environmental Change* 22 (1): 55-66.

⁵⁵ UN-HABITAT. 2011. *Cities and Climate Change: Global Report on Human Settlements*.

Exhibit 22



thway to a Low Carbon Economy,' 2009

- *Ecosystem degradation.* Urban expansion accounts for two million hectares of land use change per year, 80 percent of which is cropland. Some of this expansion is taking place in areas that are particularly vulnerable to climate change, such as coastal areas, drought prone areas, and other areas facing risks of increased exposure to natural disasters.
- *Water.* Rapid growth in urban population has created unprecedented challenges with water provision. Today, 141 million urban dwellers live without access to improved drinking water, and one out of four city residents – over 800 million people in total - lack access to adequate drinking water and improved sanitation facilities. Though water supply and sanitation coverage increased between 1990 and 2008, the rapid growth of the world's urban populations jeopardizes those results. In addition, 80 percent of projected urban municipal water needs will come from the developing world between now and 2025.⁵⁶

Buildings and transportation, particularly in the urban context, will play a major role in shaping our environmental future. Compact city development, transit oriented development, and building urban resilience through robust design offer opportunities to make our urban areas more sustainable (Exhibit 23 and 24).

⁵⁶ UN-HABITAT. 2010. *State of the World's Cities, 2010/2011: Cities for All – Bridging the Urban Divide*.

Buildings: urban development causal chain

ILLUSTRATIVE
NOT EXHAUSTIVE

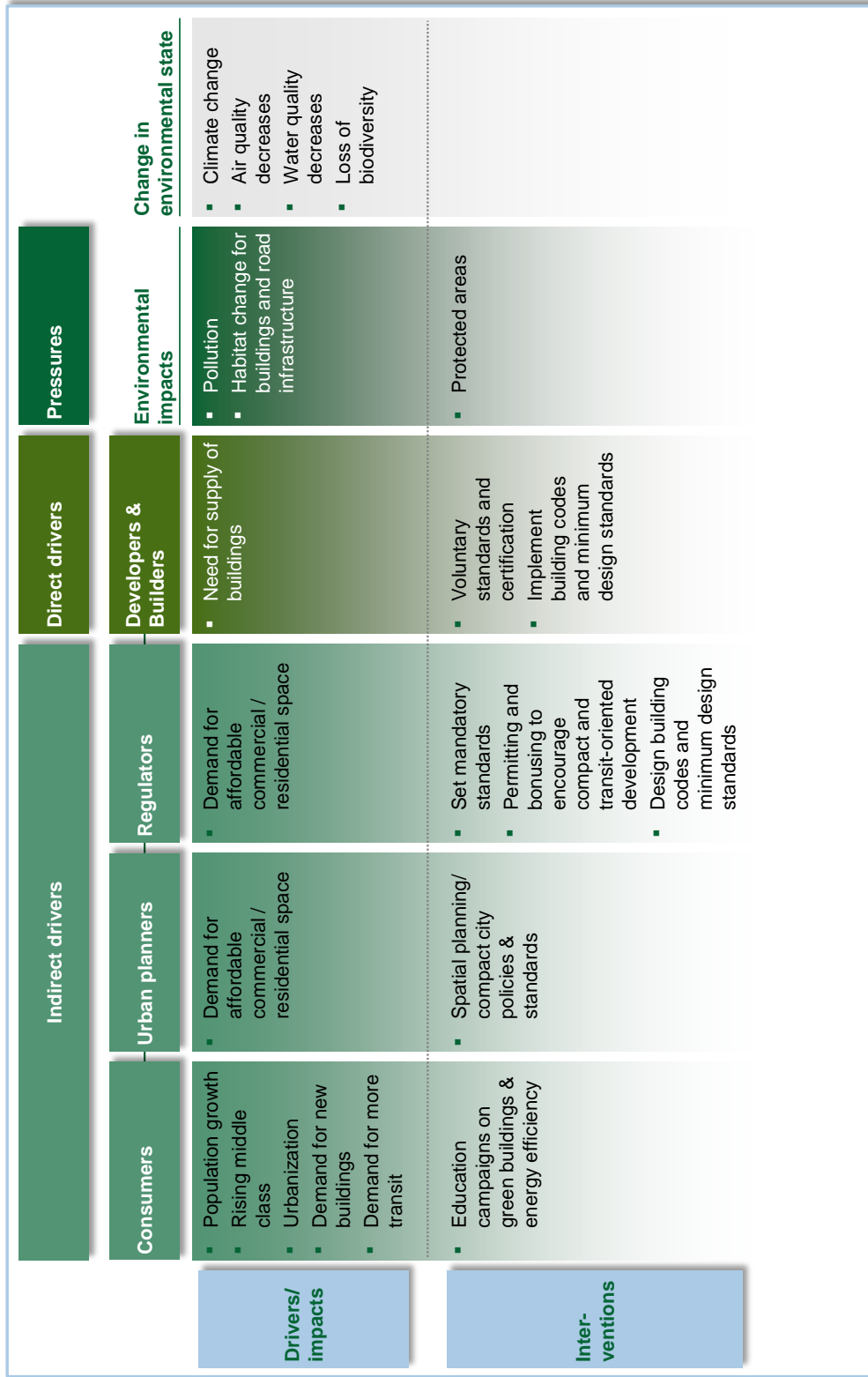
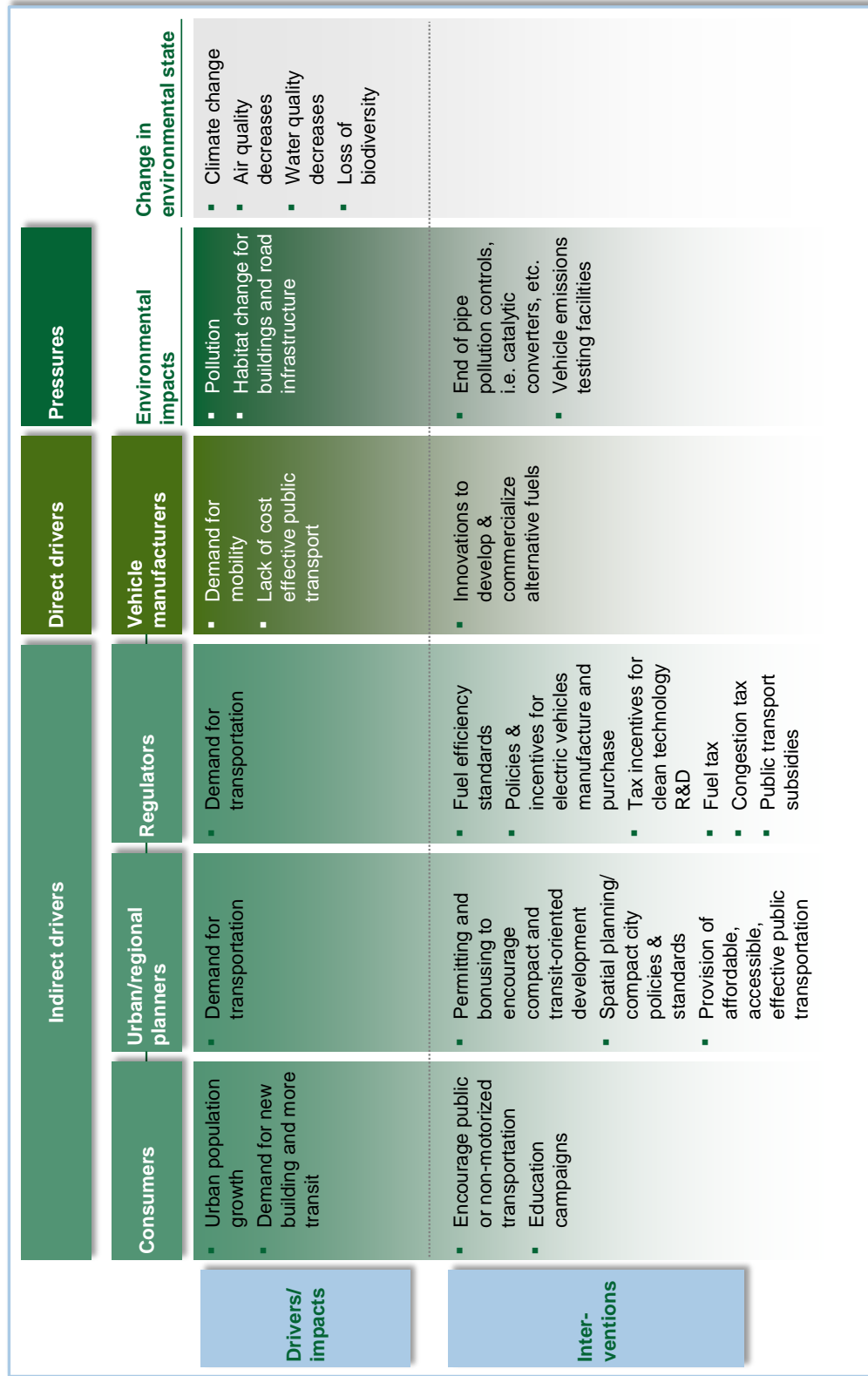


Exhibit 24

Transportation: vehicle causal chain

ILLUSTRATIVE
NOT EXHAUSTIVE









Electric power

Electricity generation can create significant environmental pressures, depending on the type of fuel and technology used (**Error! Reference source not found.**). Coal, nuclear and natural gas, in particular, result in significant environmental pressures across several of our programs.⁵⁷

Exhibit 25

Comparison of environmental pressures resulting from electricity generation by fuel type

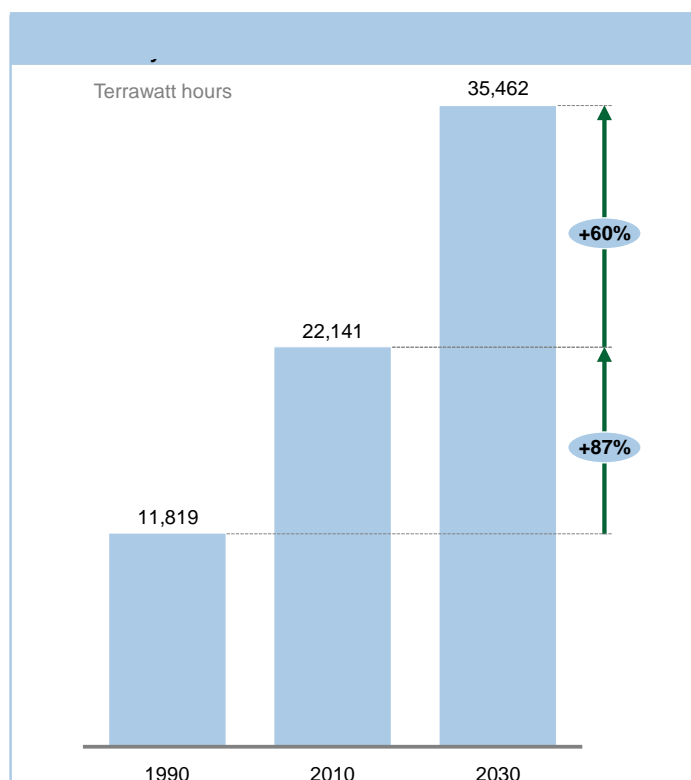
	Biomass 	Coal 	Nuclear 	Natural Gas 	Solar 	Wind 
Climate change impact	Moderate	High	Low	High	Low	Low
Air pollution impact	Moderate	High	Low	Moderate	Low	Low
Land impact	Moderate	High	High	Moderate	Moderate	Moderate
Water impact	Moderate	High	High	High	Low	Low
Other impacts (Noise/visual impacts)	Moderate	Moderate	High	Moderate	Low	Moderate

Note: The color coding presents the relative level of the impacts across technologies. *Red* indicates that the sum of the hidden costs in that category is high. *Yellow* indicates moderate costs, and *green* indicates low costs. These were inevitably subjective judgments by the authors, as different kinds of impacts had to be weighed against each other.

⁵⁷ Adapted from “The Hidden Costs of Electricity: Comparing the Hidden Costs of Power Generation Fuels” by Synapse Energy Economics, Inc. 19 Sept. 2012

Despite falling electricity intensity, global electricity generation nearly doubled over the last two decades (Exhibit 26).

Exhibit 26⁵⁸



Even with this growth in electric supply, over 1.2 billion people (20 percent of the world's population) are still without access to electricity worldwide.⁵⁹ Most of these people live in developing countries, including about 550 million in Africa, and over 400 million in India.⁶⁰ Providing these people with affordable, clean energy is a high political priority. We have an opportunity to help achieve this without exacerbating pressures on climate change, ecosystem change and water.

⁵⁸ IEA (2012), World Energy Outlook 2012, OECD Publishing; McKinsey, 'Pathway to a Low Carbon Economy,' 2009; McKinsey GHG Abatement Cost Curve v2.0, 2009

⁵⁹ Banerjee, Sudeshna Ghosh; Bhatia, Mikul; Azuela, Gabriela Elizondo; Jaques, Ivan; Sarkar, Ashok; Portale, Elisa; Bushueva, Irina; Angelou, Nicolina; Inon, Javier Gustavo. 2013. *Executive summary*. Vol. 1 of *Global tracking framework*. Sustainable energy for all. Washington DC; World Bank.

⁶⁰ Banerjee, Sudeshna Ghosh; Bhatia, Mikul; Azuela, Gabriela Elizondo; Jaques, Ivan; Sarkar, Ashok; Portale, Elisa; Bushueva, Irina; Angelou, Nicolina; Inon, Javier Gustavo. 2013. *Executive summary*. Vol. 1 of *Global tracking framework*. Sustainable energy for all. Washington DC; World Bank.

- *Climate Change:* The electric power sector is projected to be one of the major sources of growth in global greenhouse gas emissions between 2005 and 2030.⁶¹ In countries relying heavily on coal-fired power generation, such as India and China, it is often the single largest contributor to greenhouse gas emissions. Controlling future growth of emissions from coal-fired electric power will depend to a large extent on the strength of policy measures that promote lower greenhouse gas emissions. Such policies will be especially important in China and India which account for almost 75 percent of projected non-OECD coal demand growth.⁶²
- *Ecosystems:* Ecosystems face pressures from several parts of the electric power causal chain. Carbon dioxide emissions contribute to climate change, which in turn, is expected to be a significant cause of ecosystem degradation in the next few decades.⁶³ Coal-fired plants emit SO₂ and NO_x, which contribute to soil and water acidification.⁶⁴ Strip mining of coal results in significant deforestation and land erosion. The spent fuel from nuclear power plants creates hazardous waste, destroying land usability in neighboring areas. Drilling for natural gas requires land clearing and fragmentation of natural habitats resulting in species dispersal. Technologies that respond to drivers in one focal area may be undertaken in ways that create pressures on other focal areas. For example, large-scale, ground-mounted solar projects may threaten species' habitat. Wind power can contribute to avian mortality, resulting in an estimated 0.2 – 2 deaths per GWh generated.⁶⁵
- *Water:* Water is a key input to some electricity generation technologies. It is also used upstream in the extraction, transport, and processing of oil, gas, and coal. During electricity generation it is used for cooling purposes for coal, gas and nuclear power generation technologies, and increasingly to irrigate crops used for biofuels. The International Energy Agency projects that the amount of fresh water consumed for world energy production will double within the next 25 years.⁶⁶ More than half of existing and planned power plants in South and Southeast Asia are located in areas currently considered water scarce or stressed.⁶⁷ Managing the environmental pressure of the energy sector's water use will require the adoption of water-efficient technology and a greater integration of energy and water use planning and policies.

⁶¹ IEA. 2012., *World Energy Outlook 2012*, OECD Publishing.

⁶² *ibid*

⁶³ Millennium Ecosystem Assessment, *Ecosystems and Human well-being Biodiversity Synthesis*, World Resources Institute, 2005.

⁶⁴ "The Hidden Costs of Electricity: Comparing the Hidden Costs of Power Generation Fuels" by Synapse Energy Economics, Inc. 19 Sept. 2012

⁶⁵ "The Hidden Costs of Electricity: Comparing the Hidden Costs of Power Generation Fuels" by Synapse Energy Economics, Inc. 19 Sept. 2012

⁶⁶ IEA World Energy Outlook 2012

⁶⁷ Over Heating: Financial Risks from Water Constraints on Power Generation in Asia, WRI 2010.

Electric power: coal-fired power generation causal chain

ILLUSTRATIVE
NOT EXHAUSTIVE

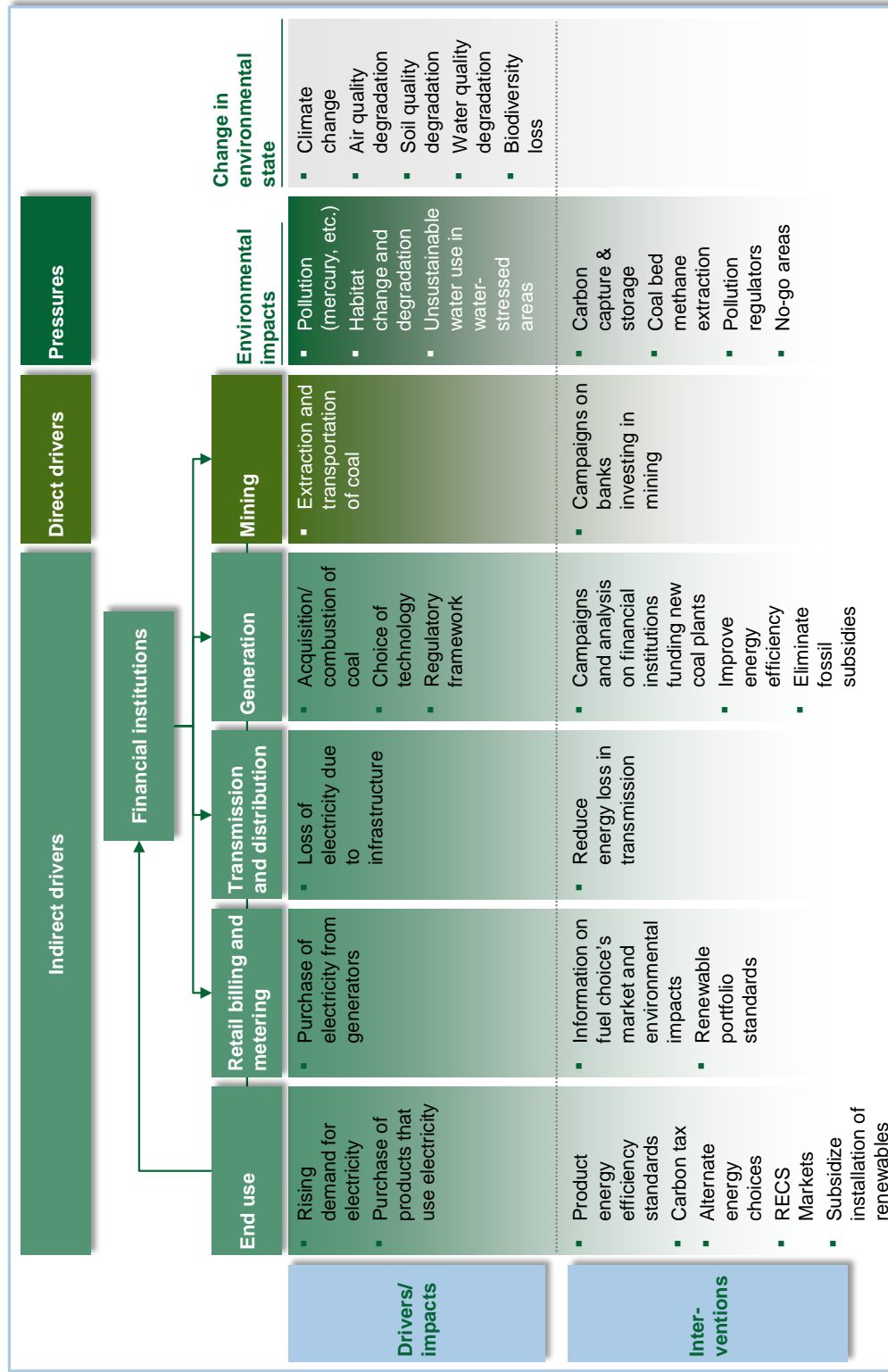


Exhibit 27

Annex III: Operationalizing Private Sector Engagement

The first GEF-6 replenishment meeting discussed the critical need for the GEF to enhance its private sector engagement. This section describes the GEF's historical approaches and lessons learned; discusses new and expanded approaches for GEF-6; and presents potential operational implications.

There are compelling reasons why engaging the private sector is a higher priority in addressing global environmental challenges. The private sector is increasingly dependent on scarce natural resources, and has the most to lose as those resources dry up. The private sector is already reacting to the drivers of population growth, rising middle class, and increasing urbanization, recognizing that business as usual approaches are not sustainable. The private sector dominates the entire economic sphere, and therefore limited public sector resources need to be better utilized to redirect private sector activities towards environmentally sustainable approaches.

GEF's Historical Approaches for Private Sector Engagement

GEF has a long history of private sector engagement with a number of successful projects. However, those efforts have only been loosely organized and insufficiently replicated across focal areas, institutions, and countries. In GEF-4 and GEF-5, projects geared towards private sector engagement tended to use ear-marked funding and included non-grant instruments, which address important barriers to private sector engagement.⁶⁸

GEF and its partner agencies have typically used four intervention models to engage private sector partners and catalyze private sector investment.

(a) Enabling policy environments. Policy and regulatory development (e.g., feed-in tariffs for renewable energy, regulatory incentives that guarantee markets for new sustainability innovations and encourage business to make long-term investments, financial regulatory frameworks) that is critical to putting the right incentives in place to steer their activities in an environmentally sustainable manner.

(b) Incremental financing for risk reduction. Incremental financing—whether through grants, debt, equity, guarantees, structured products or other de-risking mechanisms—for projects that are close to commercialization but require a little push in the right direction. GEF finance has helped transform such markets by taking risk positions within capital and/or financing structures that would otherwise not be filled from commercial sources. The GEF-5 private sector set-aside of \$80 million focused entirely on providing catalytic financing through the use of non-grant instruments. Incremental financing in the form of grants to promote private sector investment has been used on hundreds of traditional GEF projects as well.

⁶⁸ Barriers to greater private sector investment have been enumerated in several GEF papers, including GEF/C.28/14, GEF Strategy to Enhance Engagement with the Private Sector (2006) and GEF/C.41/09/Rev.01, Revised Strategy for Enhancing Engagement with the Private Sector (2011).

(c) Corporate alliances. GEF has consistently shown success with its agencies in creating alliances to promote environmental objectives, which can include private-private or public-private partnerships. Examples include working with the Rain Forest Alliance to promote sustainable coffee production; working with the Forest Stewardship Council to promote sustainable forestry; with the Marine Stewardship Council to promote sustainable fishing; and with the lighting industry to promote energy efficient lighting. These alliances were particularly effective in developing and documenting industry best practices, standards, and certifications.

(d) Capacity building and incubation. The GEF is known for providing capacity building assistance for public agencies to enhance policy and regulatory development and implementation. In addition, GEF has also provided capacity building assistance for the private sector, especially smallholders, cooperatives, community organizations, and small and medium enterprises—actors who drive innovation and growth in developing countries. GEF is virtually unique in its ability to provide grant funding that can be used for capacity building, incubation, advisory services, innovation and commercialization, and mentoring.

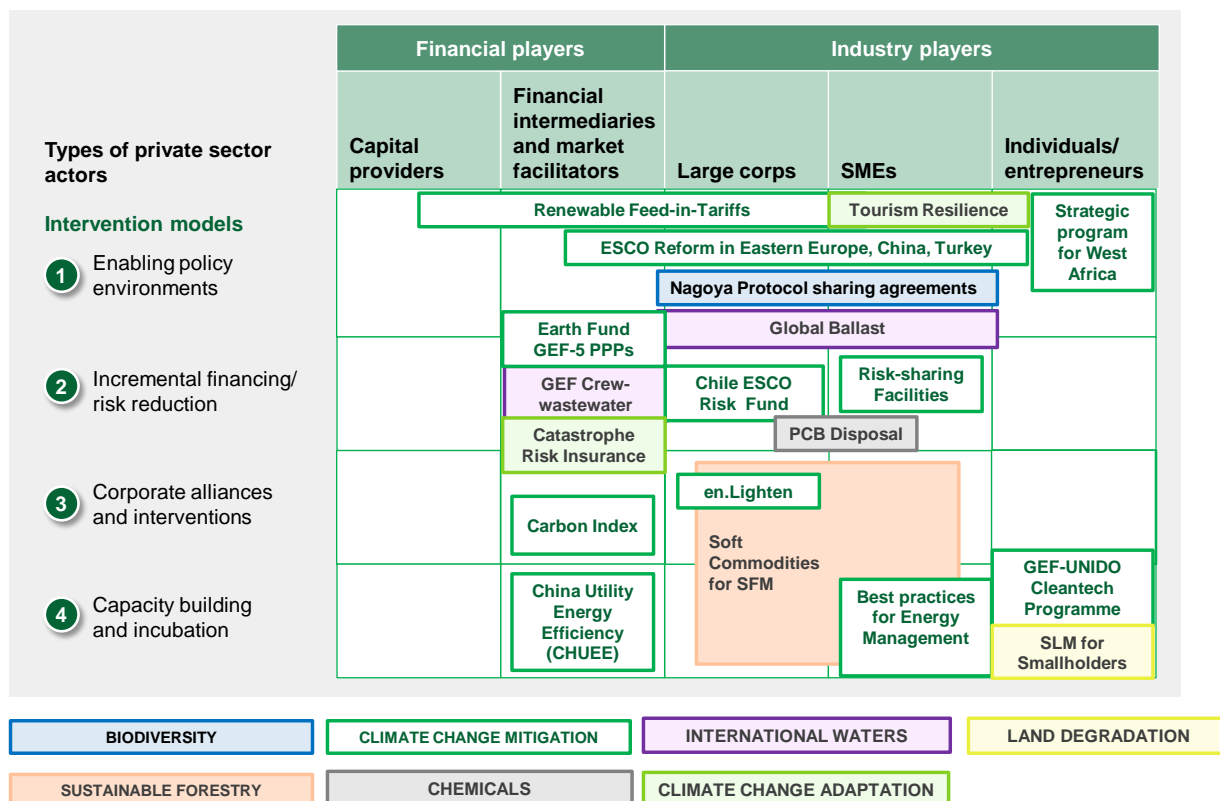
These interventions are most effective when they are fine-tuned to specific types of private sector actors and the specific needs and gaps based on local conditions. As shown in Exhibit 28, the GEF has had successful efforts in engagement with many specific private sector actors, including: capital providers and institutional investors; financial intermediaries and market facilitators; and industry partners in specific sizes, such as large corporations; SME, and individuals, co-operatives, and entrepreneurs.

Lessons Learned from Previous Private Sector Engagements

Historically, these interventions were developed somewhat on an ad hoc basis. Private sector interventions were developed project by project, and were often highly dependent on the expertise and experience of the GEF Agency and the baseline business and policy environment in the recipient country. It is understandable for GEF Agencies and partners to focus on public institutions that have the lead in setting environmental policy and managing scarce public resources. However, under the STAR, in far too many GEF projects, private sector engagement is an after-thought and private sector stakeholders are not given the opportunities to actively engage in project design or implementation. Furthermore, when private sector engagement is prioritized, stakeholders have to deal with a variety of GEF Agency requirements and procedures that can slow the process and make the partnership with the GEF unattractive. It should also be noted that the private sector engagement has decreased under the RAF and the STAR, indicating involvement of the private sector is challenging once the resources are allocated to individual countries.

Exhibit 28

A snapshot of successful GEF interventions with the private sector



GEF-6 Private Sector Priorities

It is proposed that in GEF-6, a more holistic and comprehensive approach be undertaken by mainstreaming private sector engagement across GEF focal area strategies and proposed signature programs. Specifically, the focal area strategies identify potential opportunities to enhance private sector engagement; the signature programs also emphasize and explicitly include private sector engagement. In addition, the private sector set-aside will aim for supporting more innovative financing models and innovation through capacity building and incubation. Furthermore, GEF will broaden its efforts to engage capital providers and test less frequently used intervention models.

Potential for Focal Area Mainstreaming

Mainstreaming private sector engagement across the GEF must be a long-term priority. Opportunities of GEF-6 potential engagements, taken from the focal area strategies, include:

- (a) In Climate Change Mitigation, expanded efforts to engage private sector will include performance based instruments; risk reduction for clean energy and smart grid applications; and

corporate alliances to promote energy efficient appliances; greening of the supply chain; and Sustainable Energy For All. GEF can play an important path-breaking role in demonstration of innovative business models and engagement approaches that can be picked up and expanded by other funding organizations, such as the Green Climate Fund.

(b) In Chemicals, opportunities include work with nascent corporate alliances to manage E-waste; expand private sector partnerships for disposal of PCBs; and develop partnerships on green chemistry that can develop new products and processes that reduce harmful by-products and toxic waste-streams.

(c) In Climate Change Adaptation, opportunities include support for enhanced climate risk assessment tools that can be used by private sector investors and insurance companies; supporting technologies and business models for adoption of climate/weather services and drought tolerant techniques and crops, for example, which can build capacity for smallholders to adopt Climate Smart Agriculture techniques. Expanding insurance access for countries vulnerable to climate change, such as Small Island Developing States and least developed countries, and working with agencies and developers to improve land-use planning could be explored.

(d) In Sustainable Forest Management, opportunities include the promotion of landscape restoration by addressing the lack of regulatory policy and enhancing awareness in partnership with all levels of industry. Another example is to promote the uptake of forest certification by capacity building in the underdeveloped markets, engaging across the entire supply chain from micro and SME producers to investment firms. GEF may also support the development of policy risk insurance for vulnerable REDD+ projects that could catalyze private sector investment.

(e) In Biodiversity, there are several opportunities including efforts to develop payment schemes for ecosystem services which will rely on proper policy development and capacity building for private sector actors. The strategy also identifies the need to expand utilization of certification which is hampered by inadequate finance, lack of awareness and under-developed markets. GEF interventions could include corporate alliances, enabling policy, and capacity building, engaging with private sector actors along the entire value chain. The strategy also identifies ideas for expanded engagement on the Nagoya Protocol (NP) where GEF support is rooted in the vision that obtaining access to genetic resources under the terms of the NP by the private sector can deliver monetary and non-monetary benefits to be shared with the providers of the genetic resources.

(f) In Land Degradation, opportunities exist to work with private sector partners to promote climate smart agriculture through capacity building for smallholders and SME; and potentially incremental financing/risk reduction for adoption of sustainable land management principles.

(g) In International Waters, there are numerous potentials for partnerships with large corporate actors, following the successful GloBallast partnership with shippers and the International Maritime Organization. Another example is working with the private sector to promote innovative, market-based approaches fostering good fishing practices and fishery management on Large Marine Ecosystems (LMEs) and Areas beyond National Jurisdiction (ABNJ). Further, there is a good opportunity for engaging with the private sector players through joint investments in joint management of surface and groundwater along the entire supply chain.

Potential for Signature Programs

The GEF-6 signature programs explicitly aim to create a platform through which the private sector can be engaged. The Signature Programs aim at addressing the major drivers of environmental degradation that need to be arrested urgently. The programs will be designed and implemented through a joint platform involving key stakeholders upfront and the private sector is an indispensable part of the platform and is expected to play a key role there.

(a) In Sustainable Cities: Harnessing Local Action for Global Commons, the opportunities to engage private sector are fundamental to the program design, including integrated urban management through stronger energy services, service providers, waste and water management, and sustainable and resilient urban planning that will necessitate strong private sector engagement. Other examples include building efficiency and smart grid applications. Potential private sector partners include developers, financial institutions, freight and transport, infrastructure construction and management companies.

(b) The signature program Taking Deforestation out of the Commodities Supply Chain is predicated on the notion that engagement with the private sector across the full supply chain in key commodities will help address the fundamental drivers of deforestation. By working with private sector partners, this program will address both supply and demand barriers to uptake of sustainable practices for commodities. The program may also help institutional investors redirect investments from unsustainable to sustainable commodities.

(c) In the signature program A New Development Path for the Amazon Basin, there is recognition that existing market forces are taking a toll on the Amazon, and that long-term solutions must recognize that new business models are needed for individuals, smallholders, agri-business, and the extractive industries.

(d) Food production: Fostering Sustainability and Resilience of Production Systems in Africa has the opportunity to change the dynamic for private sector engagement and recognize the critical role for smallholders and cooperatives in adoption of sustainable approaches to enhance food security, including Climate Smart Agriculture. For example, in areas where food transport losses lower farmer income and promote land degradation through over-use, GEF can work with the private sector to support new technologies and business models for refrigeration that reduce food transport losses. Other areas include improving access to financing, capacity building, and valuation of eco-system services.

(e) The signature program Rebuilding Global Fisheries recognizes the inability of markets to sustainably develop and manage open-access resources such as those found in the ocean. This program will strengthen institutions and catalyze a global transformation of the fisheries sector, partnering with private sector actors to adopt sustainable fishing practices.

Opportunities for Private Sector Set-Aside

There are additional opportunities for the GEF to intervene and magnify private sector engagement through the use of a private-sector set-aside. The use of private sector set-aside offers significant flexibility for innovation and is an excellent means to encourage agencies and private sector partners to propose new ideas.

In GEF-5, the private sector set-aside was oversubscribed and could not fund all the ideas presented. Examples of innovative approaches for GEF-6 include (Exhibit 29), but are not limited to:

(a) Equity funds for environmentally sound technologies and innovative business models that are having difficulty attracting commercial financing. Despite highly liquid capital markets globally, equity financing is still difficult to obtain for innovative technologies and young companies. GEF has the flexibility to invest equity at concessional terms and leverage significant additional private sector investment. Equity investments also offer the potential for returns/reflows that can be used for future projects.

(b) Greening the supply chain for major retailers, working with certification organizations and providing capacity building for SMEs who must comply with new requirements.

(c) Tapping into capital markets and asset management activities. The global capital markets-comprised of both stock and bond markets-are a vast pool of financial resources.

Exhibit 29

Options for private sector set-aside

PRELIMINARY

Types of private sector actors	Financial players		Industry players		
	Capital providers	Market facilitators	Large corps	SMEs	Individuals/ entrepreneurs
Intervention models					
1 Enabling policy environments	Climate investment indexes				
	Supporting new risk reduction tools				
2 Incremental financing/ risk reduction	Offering junior debt for structured financing			Equity funds for environmentally sound technologies and innovative business models	
	Securitize revenue streams from environmental projects				
3 Corporate alliances and interventions					
	Greening the supply chain for major retailers			ABS Business Incubators (Nagoya)	
4 Capacity building and incubation				Technical assistance to build pipeline of "Bankable" projects	

- The GEF can potentially mobilize private financing in global capital markets by promoting innovative instruments such as:
 - (i) Techniques to securitize revenue streams from environmental projects.
 - (ii) New risk reduction tools that address the growing need for policy risk insurance.
 - (iii) Junior debt for structured financing that attracts institutional investors.⁶⁹
 - (iv) Technical assistance to build pipelines of “bankable projects.”
- (d) Supporting expanded use of analysis and climate investment indexes, such as the ClimateScope tool developed by IADB,⁷⁰ that help countries document and showcase their policies for sustainable development (e.g., clean energy, low-carbon development, climate resilience, etc.) with an eye to attracting private sector investment.
- (e) Supporting the development and implementation of “ABS Business Incubators”; institutional arrangements set up for converting biodiversity-based innovations into viable businesses on Access and Benefit Sharing of genetic resources (ABS). Specifically, these incubators in one or more countries would allow small- and medium-size enterprises to grow and position themselves to engage on ABS agreements under the provisions of the Nagoya Protocol.

⁶⁹ As an example or pilot of this approach, EBRD developed an innovative structured financing approach to support energy efficiency in North Africa. The GEF supported this approach under the GEF-5 Private Sector Set-Aside in GEF Project #5143. This type of financing vehicle could be instrumental in attracting institutional investors.

⁷⁰ ClimateScope is a tool for assessing the “climate” for climate investing in Latin America and the Caribbean. <http://www5.iadb.org/mif/climatescope/2012/>.

Annex IV: Operationalizing Results Based Management and Knowledge management Systems

Strengthening our results management system

In order to be a more effective institution and a leader in addressing global environmental challenges, we must be on the cutting edge of how we manage results throughout our operations, and how we foster knowledge creation within our priority areas.

Our focus on results management has increased over the years through tools such as the Annual Monitoring Report, which monitor our progress towards our objectives. However, such tools are limited in their ability to continually inform decision-making throughout the project cycle, and quite importantly, measure our impact on the global environment.

First, a feedback loop to ensure continuous learning about what works, what does not, and why, is missing. This limits the influence of our results-based management system on future strategy setting and project or program design. Further, our tracking of project- and portfolio- level indicators lacks focus and we do not fully understand the causal links between our investments and success or failure at the portfolio level. Even our data management systems are not cutting edge. For example, the submission of project data, implementation reports, tracking tools, and mid-term reports are not automated.

Thus, fundamental changes are needed in our results management systems if we are to be effective. These changes are a precursor to the more ambitious changes that will make us a results-oriented institution, targeting our scarce resources more effectively to maximize global environmental benefits.

Our Vision for results-based management at the GEF

We envision that within 10 years, a successful results-based management (RBM) system at the GEF will be able to:

- i. Inform decisions throughout the project cycle, from setting strategy to approving projects, based on the lessons we have learned from our past investments
- ii. Demonstrate, in numbers, how our investments tackled priority drivers of environmental degradation
- iii. Tell a story of our role in catalyzing a change in the global environment cost-effectively and at scale
- iv. Continually guide our operations to achieve the institution's mission and vision

Four steps to improve results management

To achieve our vision, we will *close the feedback loop*, refocus on *measuring what matters*, demonstrate our *impact on the global environment*, and over time, ensure that we *take our RBM system to the next level*.

1. Close the feedback loop

We need to close the loop between what we learn from the implementation of our projects and the decisions we make on course corrections or new projects. Despite improvements to our RBM system, we still do not have a good understanding of what's working, what's not and why. Our past performance has only a minimal influence on project design and the direction of GEF investment; the feedback loop is broken. We need to sharpen our basic RBM processes and systems to ensure that we close this feedback loop, ensuring that the rich lessons we can draw from our results inform the way we do future business.

Foremost, we will *revamp systems and tools that are the backbone of our results management system*, including our project database (the Project Management and Information System), which has hampered our understanding and interpretation of results. Results reporting processes and interfaces will be redesigned to enable easy, automated collection of results information from GEF partners, and to allow GEF staff and stakeholders quick and easy access to results information in practical, usable formats.

Managing for results will be a continuous learning process. *Results management will be institutionalized throughout the project cycle* to ensure that the lessons being learned on the progress towards achieving results systematically feeds back to project managers and leaders at key decision points in the cycle. This will allow course corrections to be made where feasible. It will also be designed to guide the design and approval of new projects, as well as the development of focal area and signature programs.

Institutionalizing results management will require us to work closely with our partners. *We will work with our country and implementing partners to ensure that they integrate our results into their result management systems*. To do so efficiently and effectively, we will ensure that we focus on only the key metrics and indicators, and demonstrate to our partners that we will put the information they provide us to good use, and that it is not just a box-ticking exercise – a perception that prevails today.

2. Measure what matters

Focusing on a select set of core indicators measured uniformly will result in a more streamlined and effective results management system. It will also help to aggregate indicators at different levels – across countries, regions, programs and institutional portfolios. Choosing the right set of core indicators will be difficult, but it will be important in order to strengthen our ability to manage for results. Thus, we will focus on measuring a few core indicators.

Current tools track and measure hundreds of indicators. This is cumbersome, diffused, and detracts from focusing on the key indicators that matter. Projects on the ground operate in complex environments that require several indicators to be measured and monitored at those levels to assess the progress and effectiveness of a project. However, not all of them are relevant at higher levels. *We should focus only on those indicators that matter for achieving our global environmental results*. For example, measuring changes in globally significant biodiversity instead of hectares of land under protection as a proxy is more relevant to our

goals. These indicators also need to be consistent with our higher level institutional and Convention goals. We started this shift in GEF-5 and will accelerate it in the coming years.

Amongst this core set of indicators, we will also *include key indicators that demonstrate how we are playing a catalytic and transformational role*. The current metrics that seek to capture this, such as the co-financing ratio, are highly inadequate, if not misleading. Often, they end up selling us short. A good option would be to link these indicators to the priority influencing models we have identified earlier, combined with indicators on resultant changes in a sector over time.

Finally, amongst this set, *we must also measure and monitor key development indicators that demonstrate the co-benefits resulting from our investments*. In doing so, we can demonstrate that we are operating within and helping to advance the global sustainable development agenda, and provide better value for money to our country partners. Identifying these indicators and focusing on them will not be difficult since these goals are a major focus for both our country partners as well as several implementing partners.

3. Demonstrate our impact on the global environment

We need to improve our ability to tell the story of our impact at the portfolio level – programmatically and institutionally – in ways that relying solely on the aggregation of core indicators may not allow us to do. This remains a major gap in understanding our impact on the global environment. The current RBM system does not allow us to meaningfully aggregate results at the portfolio level, and even a more streamlined RBM system may not be able to do so adequately. Thus, periodically, we will need to take a step back to carry out in-depth ex-post analyses of select projects within a portfolio to understand what worked, what didn't, and more importantly, *why* – in ways that are purpose-built to be useful to the decision choices that project and program managers need to make.

The South China Sea impact evaluation by the Evaluation Office is a useful example in this respect as it examines the impact of more than 30 projects representing an investment of nearly \$150 million over a 20-year period. While it does well in telling the story of replication and broader adoption, it still falls short of telling the story of what impact GEF has had in changing environmental conditions in the South China Sea, and its implications for the global environment. For the most part, however, the Evaluation Office focuses on project evaluations. Thus, the secretariat, in partnership with the EO, could periodically undertake such portfolio-level analysis to demonstrate how our impact measures up against global environment goals.

4. Take our RBM system to the next level

Ultimately, over time, as we shift our focus to tackle the key drivers of environmental degradation, we need to reflect it in the way we manage for results. Our results management architecture will change to capture our influence on the direct and indirect drivers of environmental degradation.

Changing our results framework will require us to introduce a layer of driver-focused indicators. These indicators would eventually lead up to the global environmental goals as measured focal area indicators such as the volume of greenhouse gases mitigated, which remain consistent with the Convention goals. In most cases, these driver indicators will lead up to more than one focal area goal, thus realizing synergies across multiple focal areas, and achieving impacts beyond the focal area silos. With multi-focal area projects already

constituting nearly half of our portfolio, it further adds to the urgency of changing our results management system to demonstrate results across focal areas. Thus, driver-focused indicators will provide a better compass for us to optimize our investments to maximize global environmental benefits across focal areas.

Such a change needs to be deliberate and implemented with prudence because of its implications throughout the project cycle. Thus, we will make it operational in a phased manner. During the GEF-6 period, we will pilot the driver-focused indicators in a new results framework through the pilot Signature Programs. Based on the lessons learned from these pilot programs, we will mainstream it into the Focal and Multi-Focal Programs beyond GEF-6.

Undertaking some of these changes requires us to build results management capacity at the secretariat to complement roles and responsibilities of the implementing partners, as well as the mandate and capacity of the Evaluation Office. First, we will change staff job descriptions and performance evaluation systems across the secretariat to ensure that the responsibility for delivering GEF results is shared by all staff. Further, we will also need to add capacity to fulfill functions that are not undertaken by either our implementing partners or the EO, or if done, are inadequate for the purposes of making us a more results-oriented institution.

Once we succeed in closing the results feedback loop and measure what matters reasonably well, two potentially game-changing opportunities arise:

- *Experimental project design.* This includes designing a certain proportion of our projects specifically with evaluation in mind, such as randomized controlled trial, where precise measurement of the benefits of a given intervention is possible. Consistent with results management best practice, it offers an opportunity for us to generate knowledge and strengthen project design that will help us to scale up our impact. Over time, we aim to develop approximately 10 percent of our portfolio as experimental or quasi-experimental projects, an approach supported by STAP, which recommended that we invest more in projects “deliberately designed to evaluate environmental and social effects of project implementation.”⁷¹
- *Results-based financing.* A more robust RBM system will also enable us to experiment with results-based financing mechanisms where appropriate. This involves payment upon the delivery of measurable and verifiable results. Such approaches could be piloted where the risks of project failure are relatively low linked to models and partners from the Global Partnership on Output-Based Aid. Designed well, results-based financing is an innovative approach that assures us of value for money.

Even in the absence of a shift in focus to drivers of environmental degradation, our RBM systems must be strengthened for us to deliver results at scale and maximize value for money. The above steps will help us ensure that we are maximizing the impact of our investments on the global environmental.

⁷¹ <https://www.thegef.org/council-meeting-documents/experimental-project-design-gef-designing-projects-create-evidence-and>

Transforming or knowledge Management System

Our knowledge ecosystem consists of our collaborative network of partners, the knowledge we collectively generate, and the ways in which we employ that knowledge to scale our impact. Enhancing this knowledge ecosystem is important to the GEF for two reasons:

Multiply our impact as a global environmental solutions provider. To be truly catalytic, we will need to build an enhanced knowledge ecosystem around the performance of our investments. Given the scale of the challenges we face, we need to accomplish more than will be possible through direct investments alone. Knowledge is one of the primary vehicles through which we have the opportunity to greatly scale up our impact. The name *Global Environment Facility*, rather than *Global Environmental Fund*, was not an accident: we were designed in part to mainstream sustainable investment throughout the portfolios of our implementing agencies and beyond. Knowledge and lessons learned must be our primary tool in this effort, and if the impact of our investments can be increased by even a fraction of a percent through better use of knowledge, investment in a more robust knowledge ecosystem is warranted.

Our knowledge proposition will center on generating and sharing targeted, high-quality lessons and evidence to scale our impact, sharpening our role as a facility to inform not only the non-GEF investments of our implementing partners, but also the much larger universe of private and public investments, including bilateral funds, major foundations, private sector, and national financial institutions. Leveraging knowledge in this way, we can help other dollars flow to the most effective interventions.

Our shift in emphasis to tackling the drivers of environmental degradation also demands an enhanced knowledge ecosystem. We must better understand which approaches effectively address drivers, and more importantly, why. Given the nuances of how these drivers act on the environment in different geographical and policy contexts, understanding why approaches succeed or fail is central to understanding where and how successes can be scaled up.

Enhance our operations. Knowledge can also enhance our inner workings. As described in the discussion on results management, we need to better leverage knowledge to guide our strategic direction. An enhanced knowledge ecosystem will help close the learning feedback loop, leveraging lessons for project design and strategic direction.

Knowledge challenges at the GEF today

Responding to one of the policy recommendations emerging from negotiations for GEF-5 replenishment, we submitted a knowledge management strategy as a Council Information Document in June 2011. The Council approved a limited work plan in May 2012 that we are currently implementing without a dedicated budget or dedicated staff. Our current knowledge management efforts focus on two activities - IW:Learn and the Adaptation Learning Mechanism, which are collaborative knowledge-sharing platforms. The former is focused on our International Waters portfolio, and the latter on sharing climate change adaptation-related knowledge.

Our implementing agencies already produce and disseminate knowledge on the projects they carry out. Given their comparative advantage, what is our distinctive knowledge offer?

Our 2012 Knowledge Needs Assessment found our distinctiveness to be in learning and knowledge systems at the portfolio and global levels, rather than at the granular project-by-

project level.⁷² This provides clear direction for our contribution to an enhanced knowledge ecosystem.

Despite this, few of our current knowledge efforts provide synthesis of lessons learned beyond the project level, where our comparative knowledge advantage is perceived to be strongest. Exhibit 50 exemplifies this through an analysis of GEF-associated publications produced in 2012. Even those knowledge components that do align with user needs have limited impact because of underinvestment in outreach and dissemination of products to users that they could influence most.

A 2011 survey of GEF Secretariat and implementing agency staff conducted as part of our Knowledge Needs Assessment exposed divergent perceptions on knowledge capabilities at the Secretariat and its implementing agencies.⁷³ Secretariat staff expressed a lack of confidence in their knowledge strategy, governance, and capabilities, in contrast to implementing agency staff perceptions of their own agencies' knowledge management capabilities (Exhibit 30).

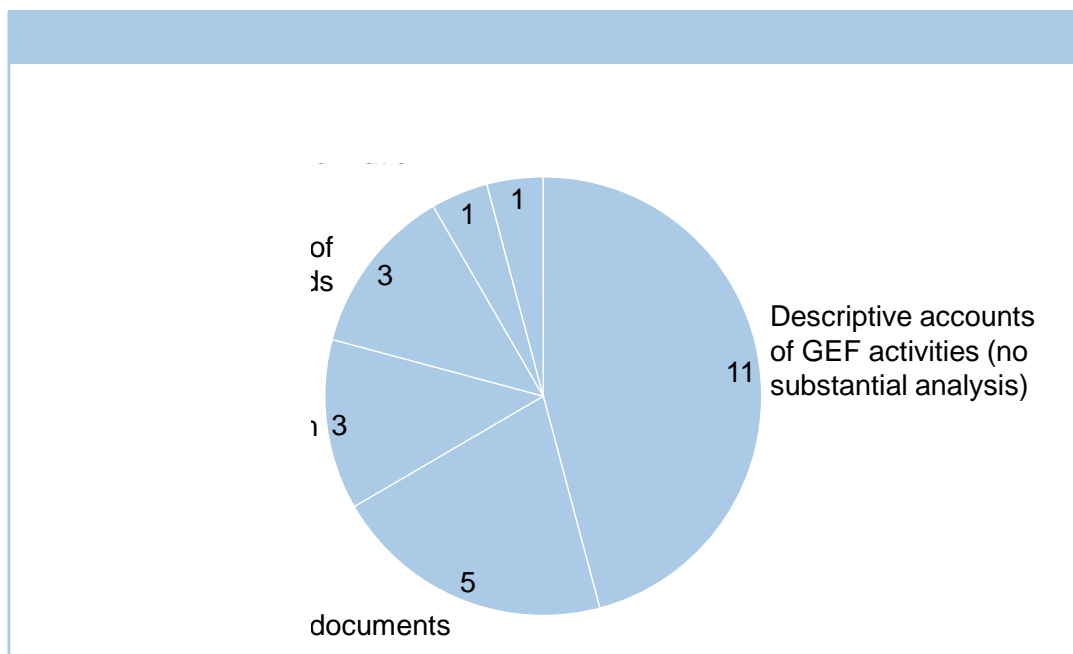
From a knowledge systems perspective, there is no systematic effort to capture lessons learned from project design and performance and to leverage that learning to scale up our impact; evaluation is seen as the exclusive domain of the independent Evaluation Office, while monitoring of project performance remains the Secretariat's responsibility, and the knowledge generated through both of these efforts falls through the gaps in the knowledge ecosystem.

⁷² Breard, Patrick. 2012. The GEF Knowledge Needs Assessment Study Report. Global Environment Facility, Washington, D.C.

⁷³ *Ibid.*

Exhibit 30

Few of GEF's knowledge products address top user needs



Our vision for an enhanced knowledge ecosystem

We need to build knowledge capabilities from the ground up. If we are successful, we envision that by 2020 we will have:

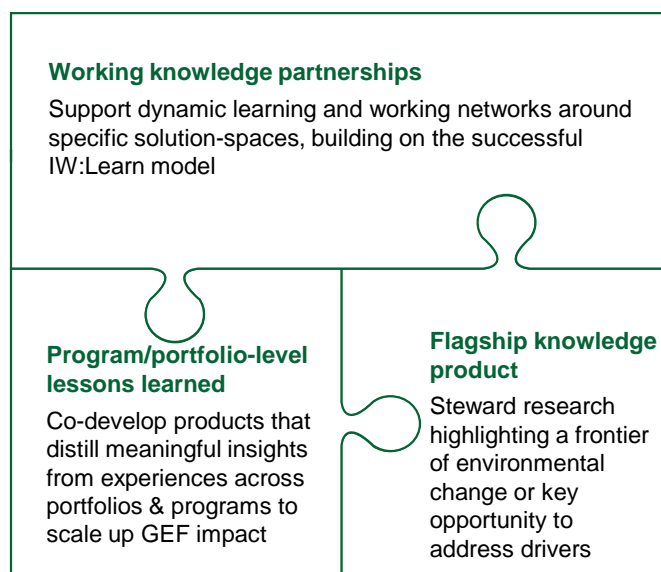
- Compelling examples of where we have used strategic investments in knowledge to help generate global environmental benefits;
- Active, solutions-oriented working knowledge partnerships, focusing on tackling the priority drivers of environmental degradation;
- A reputation as a credible and influential voice on environmental drivers and the effective use of influencing strategies to generate environmental benefits, with an open data policy to bolster this reputation;
- Confidence in our standing as a learning institution, with lessons learned from past investments fully integrated in project design and program strategy.

Key knowledge offers

We will emphasize three key knowledge offers, presented in Exhibit 31.

Exhibit 31

The GEF's distinctive knowledge products



Knowledge networks for action partnerships

In sharpening our focus on key drivers of environmental degradation, we have a critical opportunity for knowledge leadership. The GEF-6 signature programs provide a clear pathway to pilot knowledge partnerships targeting where they can add most value. We will build knowledge partnerships on the successful IW:Learn structure. We will augment this by forging stronger links between our Secretariat and knowledge networks to allow for knowledge feedback loops. These partnerships will target specific issues and knowledge users, and form around our action partnerships. For example, part of our food security signature program focuses on regreening, agroforestry and sustainable intensification practices in African drylands, where knowledge sharing between practitioners has been identified as an underserved gap. These partnerships will be the key plank of our knowledge offer, providing the means to both generate and disseminate lessons that are of the highest relevance to users.

Leverage portfolio-level learning to scale impact

Our second key knowledge offer will leverage the portfolio-level analysis developed as part of our results management activities, building on these and strategically communicating them to maximize impact. We will work with implementing agency partners to generate and

disseminate knowledge on the most scalable and transformational elements of our combined experience, presenting strong evidence on which types of interventions have had the most impact and why. This knowledge will be purposefully designed to influence investments beyond the GEF family, with the potential to greatly scale up our impact. We will also partner with leading academic and research institutions, integrating them into the knowledge ecosystem to conduct rigorous analysis and to increase the dissemination of lessons learned.

New frontiers of global environmental action

Our third key knowledge offer is the development of world-class analysis on understudied frontiers of global environmental action. This product will provide analysis and insight on future frontiers of environmental change, and will inform future areas of investment. These major research products will fill a major knowledge gap on global environmental issues, or explore new approaches to addressing GEF's priority global environmental issues. An example might be a holistic understanding the role of cities in the global environment. These products will not replicate efforts on the state of the global environment already undertaken, such as UNEP's GEO. We envision building this component over a longer time horizon, working with our agencies, STAP, and leading academic institutions, among others, to produce this knowledge product every four years.

Realizing our potential as a knowledge facilitator

Several operational changes will need to take place in order to enable this knowledge shift. We will seek to include knowledge components in each GEF-funded project and program. And we will harvest lessons learned at the portfolio-level by integrating results management and knowledge activities. To do this, we will identify the right mix of incentives and management tools to foster a knowledge culture throughout the GEF family. We believe that improved access to quality information, data and knowledge – in the right forms – will increase the productivity and effectiveness our staff and extended family, and we will move toward an open data model to support this.

An improved knowledge ecosystem will also enhance the transparency of our operations and improve our accessibility. Our policies, operational procedures, strategies, and guidance from conventions, are not always accessible, even to those that rely on them for guidance. Clear knowledge governance needs to be articulated within our Secretariat, the STAP and the Evaluation Office, with clear roles for each component of our extended family. We will foster a knowledge ecosystem that encourages implementing agencies to be active and willing knowledge partners, collecting and sharing information lessons learned.

Collectively, the above elements will provide a strong basis for our role as a global environmental leader. Realizing this ambition will require a substantial effort, given the low level of our current knowledge capabilities and the mismatch between user needs and the functioning of the current knowledge ecosystem. We will not duplicate the knowledge efforts and capabilities of the various elements of the GEF family, but instead focus on more effectively linking them together, filling gaps that prevent us from using knowledge as a tool to scale up our impact.