The GEF and Climate Change
Catalyzing Transformation

Naoko Ishii
CEO and Chairperson
Global Environment Facility

We are at a defining moment for the future of our planet and its peoples.

Climate change affects every nation and every person. Droughts, violent storms, sea-level rise and other changes are destabilizing critical ecosystems, undermining economic activity and jeopardizing livelihoods across the globe. The climate is a vital Earth system, that if compromised will put everyone's future prosperity and well-being at risk.

Urgent action is needed to drastically cut greenhouse gas emissions, invest in adaptation and build resilience to the growing impacts of our rapidly warming world.

The next ten years will see another 700 million people added to the global population, more than 1 billion additional middle-class consumers and a 50% increase in economic output.

Shifting to a low-carbon and resilient trajectory will require coordinated, integrated solutions to catalyze transformation of three key economic systems: energy—how we power our homes, offices and industry, and move goods and people from one place to another; cities—how we live; and food production—how and where we produce food, and what we eat. This will require actions on multiple fronts and at all levels of society.

Based on our quarter century of experience and a wide network of partners, the Global Environment Facility (GEF) is well-placed to support this transformation. Rooted in our role as a financing mechanism of the UNFCCC and other key international agreements, the GEF's resources help catalyze action and direct larger-scale financing flows toward low-carbon and resilient investments. We support partnerships at local, national and regional levels around integrated solutions in areas like energy efficiency, renewable energy, sustainable cities, land degradation, deforestation, food security and resilience.

The newly adopted Sustainable Development Goals (SDGs) recognize that the health of the global commons is essential for a thriving world. A strong climate agreement backed by action on the ground will help us achieve the SDGs. But with the underlying drivers of degradation still at play, our efforts must only intensify.

Science

Driven by human activities, the global climate is rapidly moving out of the stable band we have enjoyed for the past 10,000 years, testing the limits of planetary boundaries within which human societies have prospered so far.

The scientific consensus for urgent action on climate change is unequivocal. In 2014, the Intergovernmental Panel on Climate Change made clear that the longer we delay in tackling climate change, the higher the risks and costs. The next couple of decades are critical.

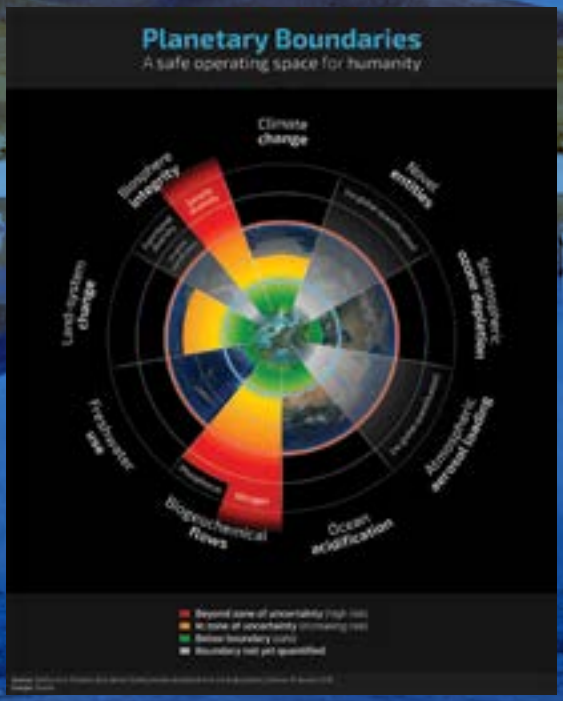
Climate change is a complex challenge that interacts with eight other planetary boundaries, themselves essential to ensure long-term human prosperity.

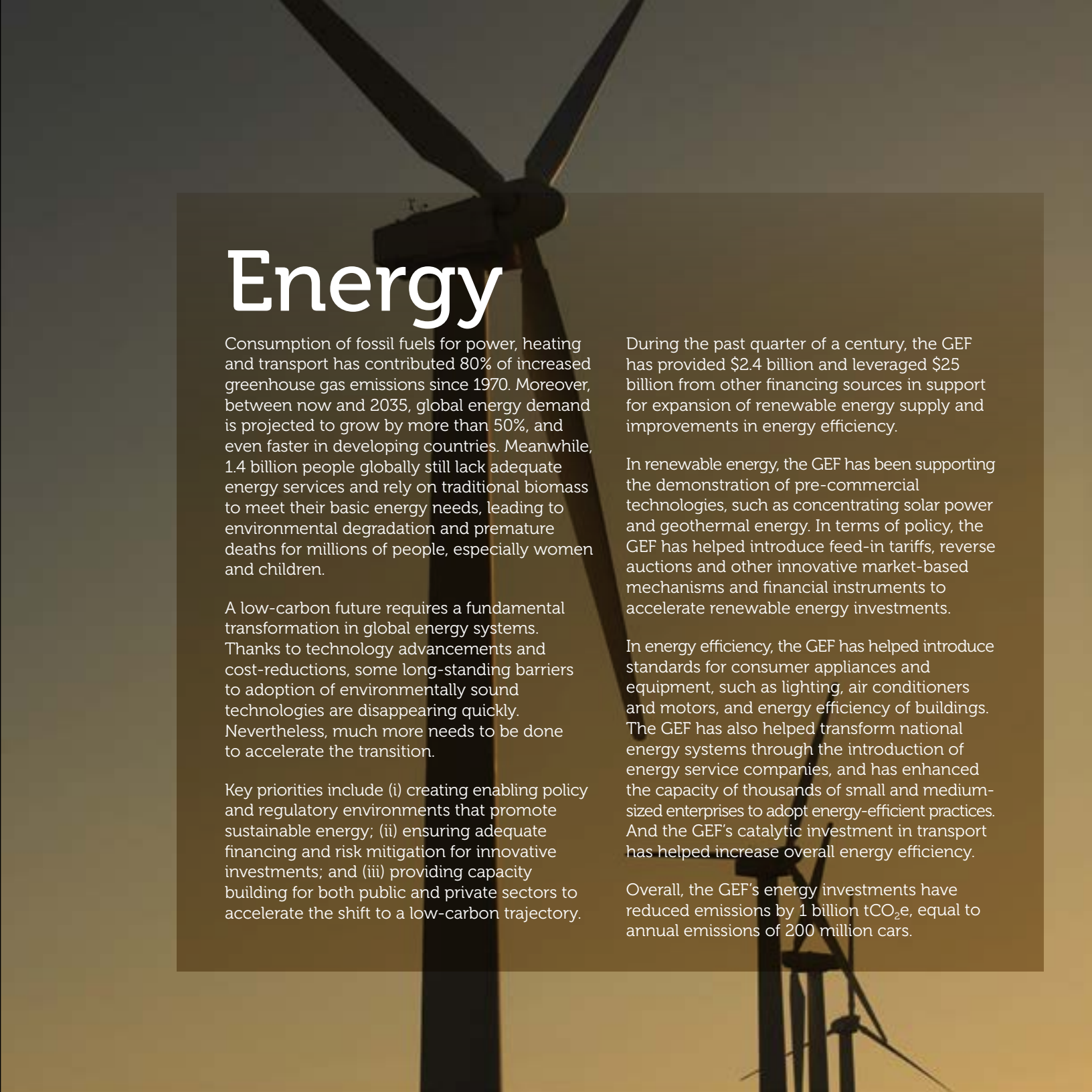
Therefore, solutions to climate change call for integrated approaches that account for the needs and interconnections between the many environmental dimensions at the local, regional and global levels.

Mitigation actions involve direct reduction of GHG emissions through, for example, the scaling up of integrated urban management, sustainable transport, renewable energy and energy efficiency. But effective mitigation also includes reducing emissions from other sectors, such as land use and forestry, and protecting carbon sinks such as the oceans.

The multi-disciplinary nature of the threats to our climate and to the global environment—and of the solutions needed to counter these threats—is reflected in the mission of the GEF to support a range of key multilateral environmental accords, including the UNFCCC, CBD and UNCCD.

The GEF promotes sustainable development by helping ensure that our societies thrive within safe planetary boundary limits, and critically by avoiding disruptive changes to climate on our planet.





Energy

Consumption of fossil fuels for power, heating and transport has contributed 80% of increased greenhouse gas emissions since 1970. Moreover, between now and 2035, global energy demand is projected to grow by more than 50%, and even faster in developing countries. Meanwhile, 1.4 billion people globally still lack adequate energy services and rely on traditional biomass to meet their basic energy needs, leading to environmental degradation and premature deaths for millions of people, especially women and children.

A low-carbon future requires a fundamental transformation in global energy systems. Thanks to technology advancements and cost-reductions, some long-standing barriers to adoption of environmentally sound technologies are disappearing quickly. Nevertheless, much more needs to be done to accelerate the transition.

Key priorities include (i) creating enabling policy and regulatory environments that promote sustainable energy; (ii) ensuring adequate financing and risk mitigation for innovative investments; and (iii) providing capacity building for both public and private sectors to accelerate the shift to a low-carbon trajectory.

During the past quarter of a century, the GEF has provided $2.4 billion and leveraged $25 billion from other financing sources in support for expansion of renewable energy supply and improvements in energy efficiency.

In renewable energy, the GEF has been supporting the demonstration of pre-commercial technologies, such as concentrating solar power and geothermal energy. In terms of policy, the GEF has helped introduce feed-in tariffs, reverse auctions and other innovative market-based mechanisms and financial instruments to accelerate renewable energy investments.

In energy efficiency, the GEF has helped introduce standards for consumer appliances and equipment, such as lighting, air conditioners and motors, and energy efficiency of buildings. The GEF has also helped transform national energy systems through the introduction of energy service companies, and has enhanced the capacity of thousands of small and medium-sized enterprises to adopt energy-efficient practices. And the GEF's catalytic investment in transport has helped increase overall energy efficiency.

Overall, the GEF's energy investments have reduced emissions by 1 billion tCO_2e, equal to annual emissions of 200 million cars.

Cities

Cities are poised to spearhead a global movement toward low-carbon development. By 2050, more than 2 billion additional people will be living in cities, an increase of over 50% compared to today. Cities already account for two-thirds of global energy consumption and for over 70% of global GHG emissions. At the same time, many cities—including 11 of the world's 15 largest cities—are located in coastal zones, making the hundreds of millions of people living there vulnerable to sea-level rises and flooding.

In a rapidly urbanizing world, compact, resilient, inclusive and resource-efficient cities can become the drivers of sustainable development and economic growth, contributing to both local livability and global public goods.

The GEF has been collaborating with a broad spectrum of local and global institutions to support the effort of city leaders to both reduce cities' GHG footprint and to make them more resilient to the adverse effects of climate change.

A new Sustainable Cities program, where the GEF is providing $150 million as part of an overall financing package of $1.5 billion, will give further impetus to these efforts. Led by the World Bank and implemented by several GEF partner agencies, the Sustainable Cities Program initially targets 23 cities in 11 countries and will (i) facilitate knowledge-sharing among city leaders on policy reform and innovation to inform and inspire climate action; (ii) develop and deploy common standards and tools that will help enhance credibility, transparency and usability of cities' GHG commitments; (iii) enhance the capacity of local leaders to develop and execute integrated city-wide low-carbon plans; and (iv) provide finance for selected urban low-carbon infrastructure, building on the experiences from the GEF's many past catalytic city investments. The program is expected to avoid or reduce emissions of 100 million tCO_2e.

Forest

Forests provide vital ecosystem services at a global scale such as climate regulation, watershed protection, biodiversity and habitats, and food, fuel and fiber. They are also a key carbon sink. However, forest loss now accounts for about 12% of annual, global greenhouse gas emissions, making forests the third-largest source of emissions.

About 7.6 million hectares (ha) of forests are lost every year due to expansion of agricultural lands—including for global commodities like palm oil, soy and beef, which accounts for 80% of tropical deforestation—illegal logging, mining and infrastructure development.

The GEF takes an integrated approach to sustainable forest management for multiple benefits, working with governments, commercial actors, local communities and other stakeholders to address the underlying drivers of deforestation, with the aim of mitigating climate change, preserving biodiversity, and bolstering the forest resource base and local livelihoods.

Since 2010, the GEF has supported over 80 countries through its dedicated SFM/REDD+ Incentive Mechanism, which explicitly recognizes the multiple benefits provided by forests. The GEF has provided $700 million, which has mobilized $4.6 billion from a range of other sources. GEF-supported investments will improve management in over 30 million ha of forest landscapes; restore over 500,000 ha of forest; and yield GHG benefits of at least 128 million tCO_2e through the avoidance of GHG emissions from deforestation and forest degradation.

With nearly $500 million in funding from a variety of sources, the GEF's new flagship program Taking Deforestation out of Commodity Supply Chains focuses on introducing sustainability measures throughout beef, palm oil and soy supply chains. Working with public, private and civil society sectors in key production geographies in Asia, Africa and Latin America and global demand actors, the program aims to support 23 million ha under sustainable practices and mitigate 80 million tCO_2e from avoided deforestation.

The Amazon Sustainable Landscapes Program brings together Brazil, Colombia and Peru in the first, large-scale regional collaboration effort on the Amazon. It utilizes a $113 million GEF grant and $682 million in additional financing to help protect over 80% of the Amazon and boost efforts to combat climate change. The program aims to maintain 73 million ha of forest land and support actions that will help reduce emissions by 300 million tCO_2e.

Land use

Agriculture, forestry and other land use accounts for a quarter of GHG emissions. While emissions from deforestation and forest degradation, which make up about 12% of total global emissions today, are on a declining trend, agricultural emissions, currently at 13% of the global total, are projected to grow through 2030, driven by population growth and changes in dietary preferences in developing economies.

Agriculture is also critical for adaptation. Climate change will continue to have very serious and unequal effects on food security, both directly through lower yields and indirectly through higher food prices. A defining challenge for the 21st century is therefore to harness land, water and other natural resources to meet growing demands for food, feed, fiber and fuel, while at the same time reducing agricultural emissions, enhancing carbon sequestration and promoting more resilient lives and livelihoods for the rural poor.

The GEF plays a catalytic role in promoting sustainable land and water management for multiple global environmental benefits. Through the Risk Mitigation Instrument for Land Restoration Project, for example, GEF funding will be used for guarantees and subordinated loans to help catalyze additional private investments to restore degraded lands in Latin America. The project will support land restoration and integrated natural resources management over at least 45,000 ha; emissions reductions are estimated at 4.5 million tCO_2e.

GEF investments are also realizing the synergies between resilience and global environmental benefits in agriculture. The GEF's innovative program on food security and resilience will work with smallholder farmers in 12 African countries to safeguard the natural resources that underpin food security and rural livelihoods. Bringing together $900 million from a variety of sources, the program aims to enhance long-term sustainability and resilience over 10 million ha of production landscapes, reduce 10-20 million tCO_2e and reach 2-3 million beneficiary households.

The GEF is also supporting parties to the UNCCD in their efforts to achieve land degradation neutrality (LDN), as embodied in the SDGs, through voluntary national target setting, which has significant potential to help fill the global emission gap.

Adaptation

Climate change is a major obstacle to sustainable development.

Even with immediate, ambitious mitigation efforts, the global climate will change and introduce additional risk to human well-being, food and water security, public health and important global ecosystems. The impacts on weather patterns, water resources, crop yields and marine ecosystems are already disproportionately affecting the poor.

Therefore, achieving and sustaining our collective development goals necessitates a dramatic acceleration and scaling up of adaptation. It also requires significantly improved capacity at all levels of decision-making to monitor, review and strengthen adaptation strategies and measures as circumstances change.

Through its Adaptation Program, the GEF works to increase resilience to the adverse effects of climate change, with a particular focus on (i) integration across adaptation and global environmental benefits and, broadly, efforts to build more resilient human-environment systems; (ii) innovation in scalable approaches to adaptation; and (iii) core institutional capacity to enable continuous, medium- and long-term adaptation action at the national and sub-national levels.

Since 2001, the GEF—through the Least Developed Countries Fund (LDCF), the Special Climate Change Fund (SCCF) and the Strategic Priority on Adaptation program—has provided $1.3 billion in grant financing and mobilized $7 billion from other sources for 320 adaptation projects in 129 countries, including all Least Developed Countries and 33 Small Island Developing States. These projects are expected to directly reduce the vulnerability of 17 million people.

The GEF is well placed to finance cost-effective, ecosystem-based approaches to adaptation that also contribute to mitigation and other global environmental benefits. In Colombia, for example, a SCCF project is restoring 4,250 ha of upper watersheds to directly reduce the vulnerability of some 22,000 households and contribute toward a more stable water supply for 7 million people in the Bogota metropolitan area.

Adaptation has to become integral to all development. The GEF supports this transition by helping countries advance their national adaptation plan (NAP) processes. The GEF also has a global $460 million portfolio of investments in improved climate services and early-warning systems, totaling some 90 projects in 66 countries.

Finance

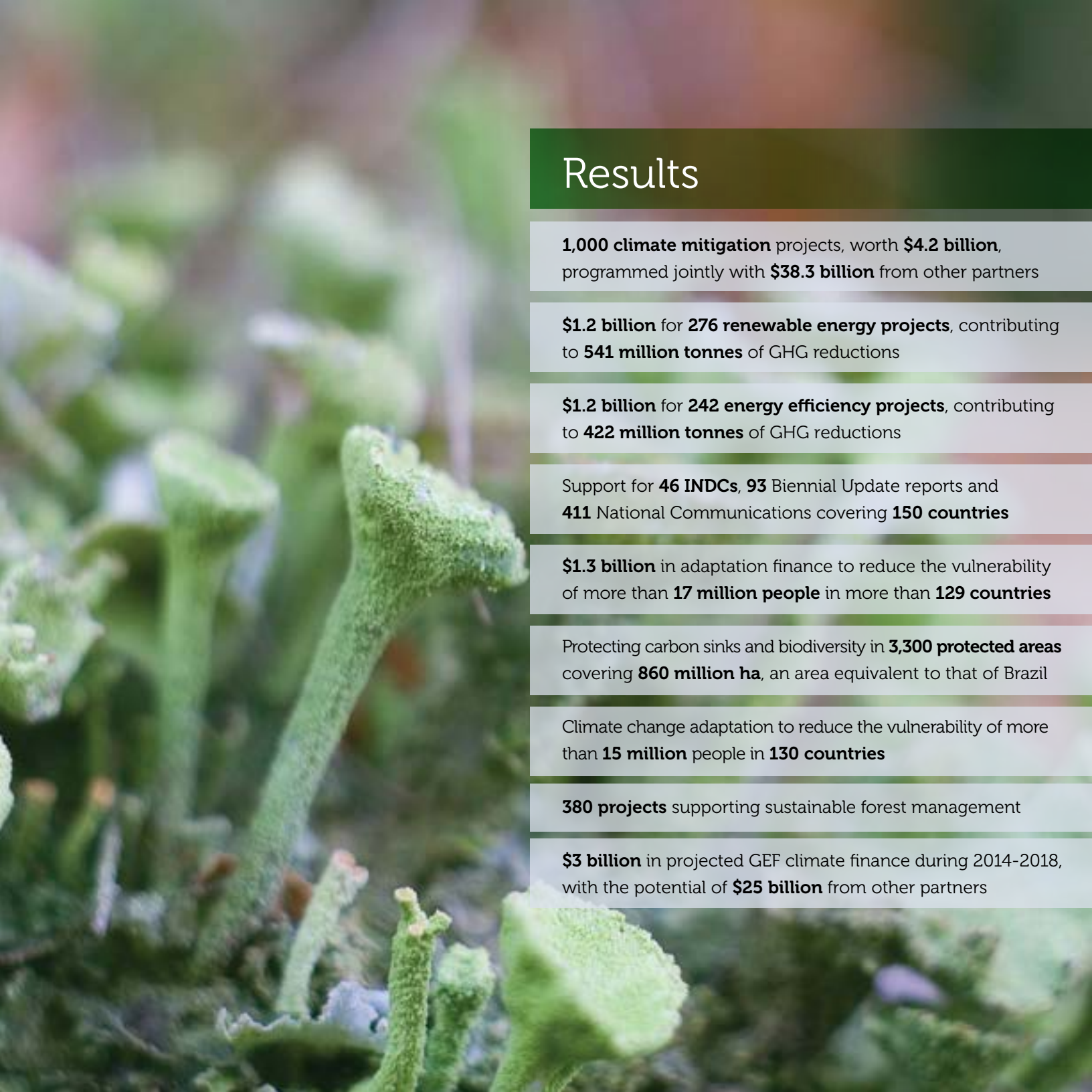
Transforming the world's energy systems, cities, and land-use practices toward a low-carbon and resilient pathway will require large-scale change in global finance flows. The overall volume of relevant financing is in the order of trillions of dollars per year, mostly coming from the private sector. It is therefore critical that scarce public resources are deployed in a way that helps catalyze the required change in financing flows.

Rooted in its role as financing mechanism for the UNFCCC and other international conventions, the GEF supports these efforts in a number of ways, including (i) improving policy frameworks to expand low-carbon investments; (ii) supporting technology innovation, demonstration and transfer; and (iii) mobilizing private sector finance.

About two-thirds of overall GEF financing can be considered "climate-related". This funding draws on more than the GEF's dedicated climate change mitigation and adaptation funding windows to include a range of investments in forests, land and water, all with significant climate benefits. All in all, the GEF will be able to make about $3 billion in climate finance available during 2014-2018 across the entire spectrum of projects and programs it is providing funding for.

The GEF's recent experiences suggest that deployment of targeted, innovative financial instruments has a significant potential for mobilizing private finance. Since GEF-5, a suite of 11 such projects has mobilized $6.3 from the private sector for each $1 from a GEF grant, significantly higher than what typical GEF climate change mitigation projects mobilize. A recent example is the GEF's provision of $4.5 million as Class A shares (with return capped at 4%), to the $150 million AfDB-led Africa Renewable Equity Fund, which targets small-scale renewable energy projects across Africa that will enable investments worth approximately $0.5 billion.

The GEF is increasingly experiencing demand for catalytic funding for "frontier sectors" such as agroforestry and land restoration. For example, the GEF has recently approved a project that takes an equity position in the Moringa Agroforestry Fund to promote sustainable land management in seven African countries. The project will deliver a range of ecosystem services, including carbon sequestration of about 9.5 million tCO_2e.



Results

1,000 climate mitigation projects, worth **$4.2 billion**, programmed jointly with **$38.3 billion** from other partners

$1.2 billion for **276 renewable energy projects**, contributing to **541 million tonnes** of GHG reductions

$1.2 billion for **242 energy efficiency projects**, contributing to **422 million tonnes** of GHG reductions

Support for **46 INDCs**, **93** Biennial Update reports and **411** National Communications covering **150 countries**

$1.3 billion in adaptation finance to reduce the vulnerability of more than **17 million people** in more than **129 countries**

Protecting carbon sinks and biodiversity in **3,300 protected areas** covering **860 million ha**, an area equivalent to that of Brazil

Climate change adaptation to reduce the vulnerability of more than **15 million** people in **130 countries**

380 projects supporting sustainable forest management

$3 billion in projected GEF climate finance during 2014-2018, with the potential of **$25 billion** from other partners

GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

About the GEF

The Global Environment Facility (GEF) was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems. Since then, the GEF has provided $14.5 billion in grants and mobilized an additional $75.4 billion in cofinancing for 3946 projects. Today, the GEF is an international partnership of 183 countries, international institutions, civil society organizations and the private sector that addresses global environmental issues.

The GEF's 18 implementing partners are Asian Development Bank (ADB), African Development Bank (AfDB), Development Bank of Latin America (CAF), Conservation International (CI), Development Bank of Southern Africa (DBSA), European Bank for Reconstruction and Development (EBRD), Foreign Economic Cooperation Office—Ministry of Environmental Protection of China (FECO), Food and Agriculture Organization of the United Nations (FAO), Fundo Brasileiro para a Biodiversidade (FUNBIO), Inter-American Development Bank (IDB), International Fund for Agricultural Development (IFAD), International Union for Conservation of Nature (IUCN), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), United Nations Industrial Development Organization (UNIDO), West African Development Bank (BOAD), World Bank Group (WBG) and World Wildlife Fund U.S. (WWF-US).

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