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Climate change is a phenomenon on the rise. This fundamental conclusion is supported overwhelmingly by scientific evidence, as well as increasingly by everyday observations and experiences of people from all walks of life, all over the world. Empirical evidence points to a myriad of ways in which increasing concentrations of greenhouse gases in the atmosphere affect human and natural systems through rising temperatures, more frequent and more intense extreme weather events, water scarcity, reduced agricultural output, higher prices of food (as well as other goods and services), outbreaks of vector-borne diseases, damage and destruction of infrastructure, and loss of life and livelihoods.

Moreover, this is happening at a time in history when human activity is inflicting unprecedented pressure on our ever-diminishing natural capital. As the world's population approaches 9 billion in size, of which over 1 billion will be middle-class consumers, it is more than ever before our common responsibility to respect the vital linkages between environment and sustainable development.

In all of this, those who are least responsible for climate change are the ones who are most vulnerable to it. In Africa alone, between 75 and 250 million people are projected to be exposed to increased water stress, reducing rain-fed agriculture yields by up to 50 percent in some regions.

The GEF has been a pioneer in adaptation financing in the last 10 years, serving a mandate given by the United Nations Framework Convention on Climate Change to deliver concrete adaptation benefits to countries vulnerable to climate change. In response to Convention guidance and a strong demand from vulnerable countries, the GEF initiated the Strategic Priority on Adaptation and established the Least Developed Countries Fund and the Special Climate Change Fund. Today, the projects supported through these funds cover developing countries all over the world, and almost every country in the group known as the Least Developed Countries.

These projects — well over a hundred in number — are showing the way for building resilience to cope with the impacts of a changing climate. They have financed adaptation initiatives in agriculture, water, disaster risk management, health, and other areas, establishing adaptation precedents and building a knowledge base through learning by doing. For instance, in the Pacific, 13 islands that represent some of the most vulnerable countries in the world are engaging in a regional cooperative effort coordinating and comparing approaches to addressing their specific challenges in key development sectors, with the aim of collectively overcoming the lack of practical experience in adaptation. In the Andes, ensuring sustainability of water services provision now entails understanding the effect of climate change on the glaciers and the implications on the entire hydrological cycle, and

modifying infrastructure and practices concerning water use accordingly. Meanwhile, in Southeastern Europe, the Special Climate Change Fund is funding the development of weather risk insurance products, allowing businesses, farmers, and homeowners to transfer their climate risk to the private sector.

Thanks to a growing portfolio of adaptation projects, different approaches are being tried and tested, allowing us to learn which innovative approaches work, which technologies can be transferred, which interventions best leverage other sources of funding (including private sources), and catalyze the most far-reaching outcomes. Indeed, we are already seeing results that will serve us well as scaling adaptation up becomes increasingly urgent. For example, in Nepal, the accelerated meltdown of the Himalayan glaciers is recasting an age-old problem. The Least Developed Countries Fund-financed intervention there draws upon the experience in Bhutan of supporting, under the same fund, a controlled, artificial drainage effort at one of the country's most dangerous glacier lakes, coupled by an early warning system.

The GEF strives to help bring about transformational change through a worldwide effort to program resilience into mainstream development efforts. The goal is that development agendas at all levels — from local communities to national governments, the private sector, civil society organizations, and indigenous peoples — incorporate the principles of sustainability and resilience championed by the GEF.



What is the Global Environment **Facility?**

The Global Environment Facility (GEF) unites 182 countries—in partnership with international institutions, nongovernmental organizations (NGOs), and the private sector—to address global environmental issues. An independent financial organization, the GEF provides grants to developing countries and countries with economies in transition for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. These projects benefit the global environment, linking local, national, and global environmental challenges, and promoting sustainable livelihoods.

Since 1991, the GEF has achieved a strong track record with developing countries and countries with economies in transition, providing \$10.5 billion¹ in grants and leveraging \$51 billion in cofinancing for over 2,700 projects in over 165 countries. Through its Small Grants Programme (SGP), the GEF has also made more than 14,000 small grants directly to civil society and community based organizations, totaling \$634 million.

The GEF partnership includes 10 agencies: African Development Bank (AfDB); Asian Development Bank (ADB); European Bank for Reconstruction and Development (EBRD); Inter-American Development Bank (IDB); International Fund for Agriculture Development (IFAD); UN Development Programme (UNDP); UN Environment Programme (UNEP); UN Food and Agriculture Organization (FAO); UN Industrial Development Organization (UNIDO); and World Bank. The Scientific and Technical Advisory Panel (STAP) oversees the technical and scientific quality of the GEF's policies and projects.

The GEF and Global **Environmental Conventions**

The GEF operates as a financial mechanism for implementing the following international conventions: United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity, the Stockholm Convention on Persistent Organic Pollutants, and the United Nations Convention to Combat Desertification. The GEF also collaborates closely with other treaties and agreements.

GEF and Adaptation Financing

Presently, the GEF finances climate change adaptation interventions through two funds: The Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF), both created under the Climate Convention. These funds now hold the most mature portfolios of adaptation projects with the largest coverage across the developing world.

With more than a half billion dollars raised from voluntary contributions from donors, the Least Developed Countries Fund and the Special Climate Change Fund have mobilized some \$370 million and \$216 million, respectively, for projects, programmatic approaches, and enabling activities supporting adaptation actions.

^{1.} All dollar amounts are U.S. dollars unless otherwise indicated.

The GEF launched the Strategic Priority on Adaptation (SPA) in 2004 in an effort to pioneer adaptation financing. The Strategic Priority on Adaptation paved the way for the operationalization of Least Developed Countries Fund and Special Climate Change Fund. It was a \$50 million allocation within the GEF Trust Fund aimed at piloting adaptation action within projects in other focal areas.

The mission, results, and achievements of the Least Developed Countries Fund, Special Climate Change Fund, and Strategic Priority on Adaptation are presented in this document.

History of GEF Support for Adaptation

During the seventh Conference of the Parties (COP) of the UNFCCC in Marrakesh, the Convention decided that the GEF would support the implementation of adaptation actions, including the following: capacity building; pilot or demonstration projects to show how adaptation planning and assessment can be practically translated into projects that will provide real benefits; and the promotion of the transfer of adaptation technologies (Marrakesh Accords 2001).2 COP7 also established the Least Developed Countries Fund and the Special Climate Change Fund and mandated prioritizing climate change adaptation in least developed countries and developing country parties to the Climate Convention.

Following this guidance, the GEF originally adopted a "piloting phase" on adaptation projects by creating in 2004 a \$50 million allocation inside the GEF Trust Fund, namely, the Strategic Priority on Adaptation. Funding was accessible to all countries eligible for GEF funding. The Strategic Priority on Adaptation portfolio is now complete, consisting of 26 projects.

The Marrakesh Accords stipulated that the Least Developed Countries Fund would support a work program for the least developed countries (LDCs) under the Climate Convention, including the National Adaptation Programmes of Action (NAPAs). It was decided that the Special Climate Change Fund would finance activities, programs, and measures relating to climate change that are complementary to those funded by the resources allocated to the GEF's climate change focal area, prioritizing adaptation and technology transfer. Both funds started operating in 2006, after the Least Developed Countries Fund/ Special Climate Change Fund Council adopted the programming procedures. Since then, these funds together have programmed more than a half billion dollars for projects and programs that implement adaptation action on the ground.

Moreover, the GEF has financed vulnerability and adaptation assessments through its support of National Communications under the Climate Convention. Since its inception, the GEF has disbursed some \$220 million for National Communications, of which a significant amount is allocated by the countries to vulnerability and adaptation studies and assessments.





Financing Adaptation Action

Strategic Priority on Adaptation (SPA)

The Strategic Priority on Adaptation (SPA) was created in response to Climate Convention guidance in 2001 asking the GEF to finance adaptation "pilot and demonstration projects that have real benefits on the ground." The fund was a groundbreaking initiative designed to support pilot and demonstration adaptation projects that provide real benefits and can be integrated into national policies and sustainable development planning. Through this allocation, the GEF financed the first concrete adaptation projects, implementing measures to reducing vulnerability and increasing the adaptive capacity of vulnerable communities and the ecosystems on which their livelihoods depend.

Twenty-six innovative pilot projects were programmed under Strategic Priority on Adaptation and an evaluation conducted by the GEF Evaluation Office has captured the initial lessons from the portfolio.3 The fund's portfolio, which is now complete, had a significant catalytic effect, helping leverage \$649 million in cofinancing.

Following are examples of adaptation projects that the GEF has financed through the Strategic Priority on Adaptation. A full list of projects is available in Annex 1.

COMMUNITY-BASED ADAPTATION PROGRAM—

Bangladesh, Bolivia, Guatemala, Jamaica, Kazakhstan, Morocco, Namibia, Niger, Samoa, and Vietnam

UNDP

Adaptation Grant

\$5.5 Million

Total Cofinancing

\$4.5 million

It is increasingly recognized that small communities are likely to be the most Implementing Agency severely affected by climate change, yet they are the least equipped to cope and Total Strategic Priority on adapt. This pilot project was designed to implement community-based projects that seek to enhance the resilience of communities, and the ecosystems on which they rely, to climate change impacts. It essentially created small-scale "project/ policy laboratories" and generated knowledge about how to achieve adaptation at the local level. Lessons learned from these community projects are lever-

aged to promote replication of successful community practices and integration of lessons learned into policies that promote increased community adaptive capacity. These small-scale projects were funded through the

Community-Based Adaptation project in each of the ten participating countries. As the approach is fundamentally bottom up, the funded projects cover a wide spectrum of activities related to climate change adaptation at the junction of biodiversity, land degradation, water resources, and human development—and cannot be described generically. Projects, which community-based organizations develop and implement, are defined by specific community needs and priorities. Examples of Community-Based Adaptation projects being funded in Morocco and Namibia are described in Boxes 1 and 2, respectively.

^{3.} http://www.thegef.org/gef/SPA%20Evaluation

BOX 1 COMMUNITY-BASED ADAPTATION IN MOROCCO

As part of a larger initiative involving pilot programs in 10 countries that aim to enhance their capacity to adapt to climate change, this community-based adaptation project in Morocco is working to address climate change-induced challenges, such as increased temperatures, water scarcity, reduced agricultural yields, and coastal erosion. The project has enabled locals to achieve sustainable water management and revegetation of eroded lands with the help of technical and regulatory innovations. The project focuses on protecting infrastructures through collection of water in ravines and burying of irrigation lines. Erosion control is achieved through tree planting and bioengineering. Food security is enhanced through greenhouse farming and the associated possibility to explore new crops. Drip irrigation systems and natural laundry methods made possible by improving water quality through phyto-remediation help with the management of scarce water resources.

One of the project sites is the Berber community of Elmoudaa, population 350, where the project has enabled locals to achieve sustainable water management and revegetation of eroded lands with the help of technical and regulatory innovations. Association Amsing, a community-based organization created by locals, has been fundamental in the project's success and therefore has been awarded UNDP's Equator Prize for Community-based Adaptation in 2012. Under Amsing's leadership, the project has managed three main outputs that have already translated into vital benefits for this community:

- Resilient infrastructure: The construction of a water "chateau," which holds a day's worth of water has supported irrigation even in
 washed out portions of canals. A new water tower has made drinking water available directly to homes for the first time.
 Greenhouses have been built for the community to experiment with new varieties of seeds and to protect staple crops from increasingly erratic weather. As a cobenefit, this type of farming reduces the individuals' food expenses, decreasing their dependence on
 outside markets for food.
- 2. Innovative regulation: Amsing developed a local regulation called "azzayn," which outlaws herders from grazing in some protected lands, imposing community-managed fines as sanctions. This action has helped native shrubs and grasses thrive, lessening the effects of erosion and reducing the risk of flash flooding.
- 3. Capacity-building: The association manages to keep all segments of the population involved in the project, participating in training and information-dissemination to ensure project sustainability. Women have been key actors in the decision-making process and have leading roles in greenhouse farming, harvesting, and the piloting of an early warning system in the community. This approach is consistent with GEF policies aimed at addressing gender-based issues in relation to environmental programs.



VRA Workshop for women: It is crucial to integrate women's knowledge and voices in the community decision-making processes. To respect the cultural norms of the separation of men and women in meetings and men's suspicion of all-women associations, Community-Based Adaptation meetings are held in women's homes as a culturally sensitive solution in Morocco. Witnessing the progress and professionalism of the associations, the husbands are now more supportive and have recognized their wives' work and invaluable contribution in the project's adaptive solutions to climate change.

CREDIT: UNDP-GEF CBA Project

BOX 2 COMMUNITY-BASED ADAPTATION IN NAMIBIA

The dry climate and poor soils in Namibia keep yields for small-scale farmers among the lowest in the world. On top of this, climate change is expected to worsen the situation. The Strategic Priority on Adaptation-funded project "Approaching community adaptation to climate change holistically by using multiple coping strategies" hence is working to address the negative impacts of climate change on food and water security. This is done in partnership with the local NGO: Creative Entrepreneurs Solution (CES). The applied strategies include but are not limited to, the following: awareness-building and assisting to integrate adaptation and agriculture into school curricula; flood and rain harvesting for agricultural irrigation, livestock and fish farming; improving the dry land crop production through composting, biochar, crop rotation, and conservation agriculture; increasing the usage of improved drought resistant fodder, rice, mushrooms and sweet stem; and finally, using energy efficient stoves and agro-forestry combined with general reforestation techniques.

His Excellency, Hifikepunye Pohamba, President of the Republic of Namibia, advocated the project to the National Assembly. After having visited local community members, he further stated that their projects are the most promising agriculture/adaptation projects in the country. As a result of the implemented adaptation measure, Namibia's staple food harvests rose from an average of 70kg per hectare to 570kg per hectare.



Pupils at the Onamulunga Combined School learn how to thin carrots. Students have the opportunity to share their climate change adaptation practices with other schools in the Oshigambo circuit.

CREDIT: Jessica Troni, UNDP



Andreas Tweendeni (center) setting up a micro drip irrigation system at the Onamulunga Combined School. Vegetable seed is planted in 40 liters poly bags allowing the user to control a local soil/ compost / manure mixture in the bags and thus controlling soil fertility and soil quality in the bags.

CREDIT: Jessica Troni, UNDP



Least Developed Countries Fund

As previously explained, the Least Developed Countries Fund was established in response to guidance from the seventh COP to the UNFCCC in Marrakesh. It aims at financing the special needs of the least developed countries under the Convention with the priority of preparation and implementation of the NAPAs. To date, the Least Developed Countries Fund has accumulated \$537.3 million in voluntary contributions from donors and approved \$381 million for projects and enabling activities (NAPAs). Its projects have leveraged \$1.71 billion in cofinancing. Being developed in cooperation with the least developed countries, this fund applies a streamlined procedure—including principles, modalities, and criteria to access the funds—that meets the countries' needs.

The results speak for themselves. Although these countries include some of the poorest in the world, and thus the least capable of adapting to the adverse effects of climate change, the Least Developed Countries Fund has funded the preparation of 49 NAPAs, of which 47 have been completed.⁴ Immediately following NAPA completion, the fund started financing projects to implement those priorities identified by the countries in their NAPAs. Currently all least developed countries that have submitted a NAPA, except Angola and Eritrea, have had at least one implementation project approved under Least

Developed Countries Fund. As of October 2012, 85 projects in 45 countries had been approved for funding, of which 42 have started implementation on the ground, generating concrete benefits to some of the world's poorest and most vulnerable communities.⁵

The least developed countries have made impressive progress in reducing their vulnerability to climate change. They are now positioned to provide examples of adaptation experience and share lessons learned with other countries around the world. On September 2009, a joint evaluation by the GEF Evaluation Office and the Evaluation Office of DANIDA was completed. In the spring of 2010, DANIDA funded a follow-up review to assess the general effort and specific actions undertaken by Least Developed Countries Fund in response to the conclusions and recommendations presented in the evaluation report.⁶

Examples of Least Developed Countries Fund projects on the ground are provided below; however, for a full list of approved projects, please refer to Annex II. Table 1 shows a list of completed and submitted NAPAs, as of September 2012.

^{4.} As of September 2012, only the NAPAs of Somalia and Myanmar had not been submitted to the UNFCCC. Both NAPAs are under final stages of preparation.

The approved projects figure includes the approval of four child projects under the program Sahel and West Africa Program Supporting the Great Green Wall Initiative (GGWI).

^{6.} http://www.thegef.org/gef/node/1907.

TABLE 1 NATIONAL ADAPTATION PROGRAMMES OF ACTION (NAPAS) COMPLETED

Number:		
alphabetical order	Country	Date NAPA received
1	Afghanistan	Sep-09
2	Angola	Dec-11
3	Bangladesh	Nov-05
4	Benin	Jan-08
5	Bhutan	May-06
6	Burkina Faso	Dec-07
7	Burundi	Feb-07
8	Cambodia	Mar-07
9	Cape Verde	Dec-07
10	Central African Republic	Jun-08
11	Chad	Feb-10
12	Comoros	Nov-06
13	Democratic Republic of Congo	Sep-06
14	Djibouti	Oct-06
15	Eritrea	May-07
16	Ethiopia	Jun-08
17	The Gambia	Jan-08
18	Guinea	Jul-07
19	Guinea-Bissau	Feb-08
20	Haiti	Dec-06
21	Kiribati	Jan-07
22	Lao People's Democratic Republic	May-09
23	Lesotho	Jun-07
24	Liberia	Jul-07
25	Madagascar	Dec-06
26	Malawi	Mar-06
27	Maldives	Mar-08
28	Mali	Dec-07
29	Mauritania	Nov-04
30	Mozambique	Jul-08
31	Nepal	Nov-10
32	Niger	Jul-06
33	Rwanda	May-07
34	Samoa	Dec-05
35	São Tomé and Príncipe	Nov-07
36	Senegal	Nov-06
37	Sierra Leone	Jun-08
38	Solomon Islands	Dec-08
39	Sudan	Jun-07
40	Tanzania	Sep-07
41	Timor-Leste	Sep-11
42	Togo	Sep-09
43	Tuvalu	May-07
44	Uganda	Dec-07
45	Vanuatu	Dec-07
46	Yemen	Apr-09
47	Zambia	Oct-07



NIGER—Implementing NAPA Priority Interventions to Build Resilience and Adaptive Capacity of the Agriculture Sector to Climate Change

The Sahelian ecosystems and agricultural systems are very sensitive to even small changes in climate and climate variability. Rainfall patterns are extremely erratic and can cause floods one year and drought the next. The projected increase in

temperature, leading to increased evapotranspiration and decrease in rainfall will thus further increase climate vulnerability in a society that already heavily depends on rainfed agriculture and pastoralism for survival. The adaptive capacity of the Nigerien farmers and pastoralists to deal with such challenges is at best marginal. Non climate-driven problems further exacerbate the situation, such problems as maladaptive farming practices, overstocking with livestock and plowing of erodible soils, low market access because of poor or nonexistent roads, and rapidly increasing rural populations, leading to expansion of agriculture into previously marginal areas. Existing problems, such as periodic food shortages, unsuitable agricultural practices, and recurrent water shortages, will undoubtedly only increase unless climate-resilience strategies are integrated into development efforts in Niger.

Based on top priorities identified in the Nigerien NAPA, this project is working to increase the resilience of food production systems and food-insecure rural communities

Implementing Agency **UNDP**

Total Least Developed Countries Fund Grant

\$3.8 Million

Total Cofinancing

\$10.9 Million

faced with the impacts of climate change. This includes a wide spectrum of new adaptation initiatives implemented in selected pilot communities. Innovative water harvesting measures are being tested for increasing crop productivity and, thereby, increasing resilience to climate change. For example, the Zai methodology entails digging holes of 0.5 m in diameter at intervals of 1-2 m and filling these holes with a mixture of compost, manure, and topsoil. Rainwater runs off the bare soil surface between the holes and ultimately drains into them. In this way, each Zai hole becomes a biological hotspot, with greater soil-water and nutrient content than the surrounding soil. Such crops as millet, sorghum, and maize are sown in the Zai holes, and their productivity is greatly increased relative to plants sown outside of these holes.

Another adaptation action that was initiated within this project is the dissemination and testing of more droughtresilient varieties of traditional crops, such as millet, sorghum, and maize. The barriers to widespread use of such crop varieties included technical capacity and financial constraints. Seeds need to be bought, and poor rural farmers cannot afford this cost. The project, therefore, was instrumental in establishing mechanisms for the sustainable diffusion of drought-adapted crop varieties to vulnerable communities.

The facilitation of food banks is another activity implemented to increase the climate change resilience of local food security. Food shortages often occur for a brief period at the end of the dry season in rural communities, a phenomenon that is likely to increase with climate change. Food banks are one method of supplying food during critical periods. This activity is sustainable, because once the food bank has been established, a selfsustaining business is generated, whereby food is bought at a discounted rate from the government, stored in the bank, and then sold to the rural communities.

A final measure implemented to counter the threat of climate change-induced impacts on crop productivity is to improve water management practices. The Niger River is currently underused as a source of irrigation water for several reasons. One is that rainfall patterns have been predictable, and, therefore, reliance on more expensive alternative sources of water has not been a priority. Second, underutilization of surface water resources through irrigation has been constrained because of a shortage of funds.

A second leg of the project focuses on increasing the institutional capacity of the agricultural sector, especially in regard to information and extension services to farmers. This includes, among other things, distributing seasonal weather forecasts and providing local advice on the design of water and crop management strategies. The

project also supports the incorporation of adaptation to climate change issues into provincial and local development and risk management plans.

The project in Niger is already providing the most vulnerable population with increased food security and climate-resilient livelihood alternatives, as well as raising awareness of climate risks and increasing preparedness and prevention policies at the local level. More broadly, the project contributes to building adaptive capacity to climate change in the agricultural sector across Niger, and even the broader Sahel. At the national level, government, NGOs, and businesses are strengthening their capacity to integrate climate change risk reduction strategies into development policies and programs.

RWANDA—Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in Flood Prone Areas

Ninety percent of the population in Total Cofinancing Rwanda depends on subsistence agriculture, which is the sector that is most affected by the impacts of climate change. The project's main objective is to reduce the vulnerability of the Gishwati ecosystem and its associated Nile-Congo watersheds, and the people that derive their livelihoods from it, to increased floods and droughts because of climate change.

The Least Developed Countries Fund project is helping 10 districts in Rwanda address their diverse adaptation needs, in partnership with UNEP, UNDP, Rwanda Agriculture Board (RAB), and African Adaptation Program (AAP).

In 2007, Rwanda completed its NAPA in which the following climate threats were highlighted: flooding, landslides, heavy rain falls, extreme temperatures, heat waves, and drought. These phenomena have translated into low agriculture productivity, water shortage, and low agricultural output. In order to face these challenges, the Rwanda Environment Management Authority, with Least Developed Countries Fund funding and UNEP execution, selected the districts of Bugesera, Gatsibo, Kayonza, Kirche, Ngororero, Nyabihu, Nyamagabe, Rubavu, Rulindo, and Rutsiro to pilot adaptation measures.

Least Developed Countries Fund-financed activities are assisted by technical services of the RAB in order to not only enhance agricultural productivity and improve water

Implementing Agency **UNEP**

Total Least Developed **Countries Fund Grant**

\$3.9 Million

\$12.4 Million

distribution and management, but also to ensure economic incentives for the local people. The project is helping local farmers and pastoralists improve their crops and get access to water for their livestock, in order to safeguard their livelihoods.

This project is already working on delivering the following results:

Climate risk assessment and forecasting: The project increases coordination, collection, and analysis of data. The focus is on strengthening the current information infrastructure for sound scientific analysis of trends in climate change and its socioeconomic impacts, and thus increasing the capacity of communities and institutions to adapt. Benefits are derived from a range of innovative climate-based analytical tools and software that allow for a far greater understanding of the temporal and spatial agricultural implications of short- and long-term climatic variability and thus allow stakeholders to develop tailored climate-risk management strategies.

Climate change adaptation planning and response strategies: Focus is in correcting the underdeveloped response mechanism of the Rwandese early warning system. Improved information is provided in appropriate formats to policy makers and communities. Activities aim at promoting the use of robust science for the formulation of adaptation strategies in the present and future. An early warning and response approach is used to increase capacity to identify, predict, and, most importantly, respond promptly to long-term droughts and floods and also to sudden and damaging climate events, which have begun to increase. Capacity increase is also developed for climate-resilient decision making from the national to the local levels.

The following are demonstrations of adaptation practices in the Nile-Congo crest watersheds and Gishwati ecosystem: restoration of the ecosystem on which the communities' economic activities heavily depend through short-term measures to address immediate risks, including the reversal of maladaptive practices and the application of selected agricultural techniques that contribute to improved integrated catchment management practices aimed at restoring the natural buffering capacity. Medium- to long-term measures aim to build both human resources and institutional adaptive capacities for the sustainability of the project impacts: (a) design and implement a capacity development program to equip communities with necessary knowledge and skills, and (b) establish an institutional framework at a watershed level where adaptation solutions can be negotiated among different stakeholder groups. The framework is integrated into the regional development and land-use planning.



BHUTAN—Reducing Climate Change-induced Risks and Vulnerabilities from Glacial Lake Outbursts in the Punakha-Wangdi and Chamkhar Valleys

Glacial retreat caused by rising temperatures is one of the most urgent concerns across the Himalayas, including in Bhutan. Climate-induced disasters, such as landslides and floods, have always been widespread in Bhutan, but glacial melt water from

rapidly retreating glaciers promises to significantly exacerbate such problems for the densely populated and economically important communities in the main river valleys. The main concern raised in Bhutan's NAPA is that the current holding capacity of high mountain glacial lakes could reach a critical threshold, leading to catastrophic flash floods downstream when natural dams fail under increasing water pressure. Massive flash floods, for example, from the collapse of the huge Thorthormi and Raphstreng lakes' natural dams would pose a major threat to life, as well as the infrastructure and economy in the affected valleys.

This project seeks to reduce climate change-induced risks and vulnerabilities from Glacial Lake Outburst Floods in the Punakha-Wangdi Valley and Chamkar Valleys. The project uses a two-pronged strategy to achieve this objective. First, the project is implementing measures to directly reduce the risk of Glacial Lake Outburst Floods by

Implementing Agency **UNDP**

Total Least Developed Countries

\$3.9 million

Total Cofinancing

\$4 million

preventing them from taking place in the first place. Through community-based adaptation, a team of geologists, glaciologists, engineers, and 250 workers are lowering the water level in Lake Thortormi (already accomplishing more than 1.5 meters). This activity builds the necessary technical capacity and serves as a demonstration example for potential replication at other dangerous glacial lakes around the country and the region.

Second, the project builds disaster risk preparedness, that is, the capacity to deal with Glacial Lake Outburst Floods when they happen. An early warning system has been set up in the heavily populated Punakha-Wangdi Valley, involving automated sensors that monitor lake levels and the stability of the natural moraine dams holding back the lake water. The sensors are connected to a network of sirens that warn local inhabitants in case of impending Glacial Lake Outburst Floods danger, and the system develops local evacuation plans that establish escape routes and safe areas where residents can take refuge within reasonable time.

The money the workers earn in lowering the water level in Lake Thortormi is already making a meaningful difference in their lives, as they are earning well above the minimum salary range in Bhutan. The benefits also extend to people beyond those actually clearing the rocks and sand. The project had considered using helicopters to bring in the

60 tons of supplies the project needs, but chose instead to employ local horse and yak herders. As a result, local communities earned more than \$150,000, helping them pay for school for their children and expand businesses. The project has, thus, improved the overall quality of life in the area, providing new investments and new opportunities. Therefore, the project is among the most concrete, tangible approaches to climate change adaptation anywhere in the world.

SIERRA LEONE—Integrating Adaptation to Climate Change into Agricultural Production and Food Security in Sierra Leone

Sierra Leone's economy depends heavily on its natural resources. Agriculture is the largest economic sector, contributing to more than 45 percent of gross domestic product and employing over 65 percent of the labor force. Rice is the main agricultural production and mainly cultivated for subsistence purposes. Because of overexploitation of the natural resources basis and as a result of civil war, the environment of Sierra Leone has been severely degraded and affected

Implementing Agency
IFAD

Total Least Developed Countries
Fund Grant
\$3 million

Total Cofinancing **\$8.6 million**



by various problems, including land degradation, deforestation, loss of biodiversity, fresh water pollution, and coastal erosion. Climatic hazards, such as seasonal droughts, thunderstorms, landslides, heat waves, floods and altered rainfall patterns, are already threatening the country. Poor communities have suffered the most from these impacts. The negative effects of human-induced climate change are expected to worsen this situation.

Least Developed Countries Fund-funding for Sierra Leone is designed to be catalytic for scaling-up adaptation to climate change using sustainable land and natural resources management. The project is working with existing community structures, such as the Farmers Business Organizations and Farmer Field Schools. Within the four years of planned project duration, this intervention is working to address and improve sustainable development of climate resilient inland valley swamp, integrated water, and natural resource management for adaptation, as well as capacity building and awarenessraising on the impacts of climate change. The project components include the following: participatory mapping and monitoring of vulnerability to climate change; climate resilient rice production systems; training local rice producers on best adaptation practices; ecosystem-based adaptation in the uplands; irrigation efficiency and drainage systems; government personnel training; agriculture climatic data collection and analysis for decision making; and knowledge and awareness on climate change at the community level.

NEPAL— Community-based Flood and Glacial Lake Outburst Flood Risk Reduction

Fragile mountain ecosystems are the mainstays of the communities in the

Total Least Developed Countries

Implementing Agency

\$6.9 million

Total Cofinancing \$18.9 M

Nepalese Himalayas. Unfortunately, the rapid growth in population and poorly managed tourism is exerting pressure on these ecosystems. Deterioration of the environment contributes to a host of problems, including chronic rural poverty, migration to urban areas, reduced agricultural land, and poorly managed disposal of solid and

industrial wastes and other forms of pollution. The most dangerous threat in some of the remotest settlements in this mountain range is the rapid melting of its glaciers caused by progressive increases in mean annual temperatures, resulting from anthropogenic climate change.

About 2,300 of the 3,300 glaciers in the Nepalese Himalayas contain glacial lakes. Because of glacier retreat, these lakes fill up and run the risk of breaking the moraines that contain them. Twenty of these lakes have been labeled as "potentially dangerous" as they are prone to Glacial Lake Outburst Floods, which release millions of cubic meters of water and debris, causing floods and turning small mountain streams into turbulent and fast-moving currents, sweeping away infrastructures. This happened in Khumbu in 1985, when a glacial lake burst washed away a hydropower station and several bridges. These flashfloods present serious long-term threats to the vulnerable mountain populations, their livelihoods, infrastructures, and economic assets.

The increasing frequency and intensity of Glacial Lake Outburst Floods disrupt the water cycles in the downstream river basins, as the glaciers no longer serve to regulate the storage and supply of water. In this region, snowmelt from the Himalayan glaciers primarily feeds the Ganges, Bramhaputra, Meghna, and Indus rivers. Current efforts by villagers to obtain funding have produced limited results, financing the building of levees with rocks and gabion wires to lessen flood damages. Substantial funding and capacity building is needed to establish the adequate monitoring and early warning systems to develop sound disaster management plans and reduce hazards and economic and social loss from Glacial Lake Outburst Floods.

In November 2010, Nepal completed its NAPA in which two priority actions were identified: 1) community-based disaster risk reduction and the climate-proofing of communal water resources for disaster-prone communities; and 2) actions required to reduce risks from imminent Glacial Lake Outburst Floods in high risk areas.

In response to these urgent and immediate needs, this project was approved to reduce the risk from Glacial Lake Outburst Floods in one hazardous glacier lake (either Imja or Tsho Rolpa), artificially reduce the lake level to decrease the risk of Glacial Lake Outburst Floods, and establish monitoring and early warning systems. In addition to hazards of Glacial Lake Outburst Floods in the mountainous region, the project will also support measures to reduce flood risks in the southern Terai areas, which have high agricultural value to the country. With about \$19 million in cofinancing, this project will reduce the level of water in the glacial lake by opening a channel that may be regulated by a sluice gate. The funds will be crucial for the cash-for-work, as well as health and safety arrangements required. The initiative will use lessons learned from the already successful Least Developed Countries Fund project in Bhutan. The project in Nepal is an additional step toward an integrated effort in reducing the risks of extreme events in the region.



Special Climate Change Fund

The Special Climate Change Fund (SCCF) was established to support adaptation and technology transfer in all developing country parties to the Climate Convention. The fund supports both long-term and short-term adaptation activities in water resources management, land management, agriculture, health, infrastructure development, fragile ecosystems, including mountainous ecosystems, and integrated coastal zone management. There are two active funding windows under Special Climate Change Fund: i) Adaptation window (Special Climate Change Fund-A) and ii) Technology Transfer window (Special Climate Change Fund-B). As of August 2012, Special Climate Change Fund-A had approved \$190.7 Million for 46 projects. Twenty-seven of these are now in different stages of implementation and two are completed. Under Special Climate Change Fund-B, six projects have been approved, two of which are now under implementation. Total Special Climate Change Fund-B grants approved amount to \$26.64 million. Through windows A and B, Special Climate Change Fund has mobilized \$1.3 billion in cofinancing.

The GEF Evaluation Office completed an independent evaluation of Special Climate Change Fund in November 2011. This document highlights the fund's relevance in national sustainable development agendas of the beneficiary countries, the innovation of the implementation measures financed by the fund, and the fund's cost-effectiveness. It is worth noting that the fund's management costs are the lowest of comparable funds.

In spite of these positive results and significant programming of adaptation projects, the demand for Special Climate Change Fund resources still highly exceeds the supply. As of September 2012, total cumulative pledges to the fund were \$240.3 million.

PACIFIC ISLANDS ADAPTATION TO CLIMATE CHANGE PROJECT (PACC)—A Cooperative Cross-

sectoral Approach to Adaptation in the Pacific region in

Cook Islands, Federated States of Micronesia, Fiji, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu

Pacific Island States are among

the most vulnerable countries in the world to the negative effects of climate change. The potential

Implementing Agency **UNDP** Total Special Climate Change Fund-A Grant

> \$14.8 million Total Cofinancing \$44.5 million

magnitude of the problem threatens the very existence of some Pacific Island States, and the achievement of sustainable development and Millennium Development Goals. Key impacts include the following: destruction of coastal resources and infrastructure as a result of sea level rise, storm surges, and increased frequency of tropical cyclones; diminishing fresh water resources as a result of reduced rainfall and sea water

intrusion into aquifers; and reduced agricultural yields owing to lower and more variable rainfall patterns that lead to increases in drought and flooding episodes.

Vulnerabilities and risks associated with climate change are not currently being addressed in a systematic way in the region. Few demonstrations of direct adaptation action in key development sectors have been implemented. As a consequence, little is being replicated and scaled up at the national and regional levels.

The PACC Project is working to address the lack of practical experience in adaptation in the Pacific Region and will provide the foundation for effective and efficient future investment on climate change adaptation. As many of the countries in the region face similar issues related to climate change, the project is based on a regional cooperative model in which each of the participating countries focuses on one specific approach to adaptation in one of three key development sectors targeted by the project: coastal management (Cook Islands, Federated States of Micronesia, Samoa, and Vanuatu); food production and food security (Fiji, Palau, Papua New Guinea, and Solomon Islands); and water (Marshall Islands, Nauru, Niue, Tonga, and Tuvalu). Lessons learned from the individual country pilots are being captured and disseminated across the region along with more overarching capacity-building activities, both nationally and regionally.

For example, the project in Vanuatu is demonstrating how climate change risks can be taken into consideration when redesigning and relocating local roads so as to take into account that roads next to the high water mark are highly vulnerable to coastal erosion and represent increasingly dangerous and inaccessible grounds for transportation. This project will relocate the current roads and include drainage systems to allow for run-off during heavy rainfall. The new design will also include sedimentation ponds, which will limit sedimentation from heavy rain reaching the island's coral reef. The main focus for this climate change adaptation project is to take into account all possible climate change impacts, including changes in rainfall patterns and sea-level rise.

In Samoa, the project has promoted a sea wall to secure the eroding coastline from sea-level rise. In addition to this, a replanting exercise has been sponsored that further contributes to the integrated coastal protection. In Solomon Islands, the project focuses on climate-resilience of subsistence food production systems on small isolated islands. In Nauru, the project is working to provide alternative water resources and water storage facilities for a raised atoll island. The collective effect of these national pilots will be a comprehensive, cross-cutting set of regionally relevant adaptation pilot experiences.

BOLIVIA, ECUADOR, AND PERU—Design and Implementation of Pilot Climate Change

Adaptation Measures in the Andean Region

Total Special Climate Change Fund-A Grant Millions of people throughout the Andes region depend on runoff from \$8.8 million glacial melting in the highlands for their **Total Cofinancing** daily fresh water needs. As Andean \$25.2 million glaciers are projected to rapidly recede over the coming years, fresh water access will be severely strained in the region, threatening agriculture, hydropower generation, and public health. The GEF has financed, through the Special Climate Change Fund, a project that will implement measures to meet the anticipated consequences of the catastrophic glacier retreat induced by climate change.

The project's activities include the updating of local and national water management policies, plans to address the long-term impacts of climate change and receding glaciers on water availability, and concrete adaptation pilots to demonstrate how climate change impacts can be integrated into practical development activities across the Andes. In addition, funding is provided for an improved system to monitor the state of glaciers and its impacts on the hydrological cycle in the region. Among the pilots being implemented is a new drinking water supply system in Quito, including developing an alternative drinking water source, implementing an integrated monitoring and management system for the catchments supplying the city's water, improving the efficiency of the city's water distribution network, and reducing consumer demand through campaigns and awareness raising. Another pilot in Peru targets agricultural production planning. It includes measures such as testing and promoting crops that are less water-demanding, demonstrating more water-efficient land and water management practices, and promoting export of new and more drought-resistant crops.

ZIMBABWE—Coping with Drought and Climate Change

Warm climatic conditions in Zimbabwe create opportunities for growing a range of crops throughout the year for as long as water is available. However, rainfall distribution is very poor for most of the country and mid-season droughts are common. Frequent short seasons make it difficult for smallholder farmers in the area to secure food and decent livelihoods. On top of this, the prevailing soil conditions cause most of the rain to run-off, hence making it unavailable for crop use.

Implementing Agency

World Bank

UNDP Total Special Climate

Implementing Agency

Change Fund-A Grant

\$1 million

Total Cofinancing

\$1.1 million

The project is working to enhance the capacity of agricultural and pastoral communities in the Chiredzi district of Zimbabwe to adapt to climate variability and change. The three-fold project strategy comprises improving climate change adaptation knowledge base to facilitate adaptation choices, piloting adaptation practices oriented on policy, and finally, implementing climate early-warning systems. Through Special Climate Change Fund funding, the project has improved food security for more than 1,000 households. This was achieved through the following activities: the diversification of crops farmed and the reduction of farmers dependent on one or two crops only; the use of in-field water harvesting; the promotion of drought-resistant crops; and the benefit-sharing of wildlife resources. Significant increases in crop yields of maize, sorghum, and pearl millet were recorded, as well as zero livestock mortality in 2009-10 during drought conditions because of significant amounts of stover provided by the project.

Bottom-up project design and participatory processes are crucial for strong ownership and identification of adaptation responses that are acceptable in the local, cultural context. The community participatory climate risk analysis has made it possible to generate more information on the temporal and spatial dynamics of drought and its impacts in the project area than could be obtained from modelling per se. Irrigation development was jettisoned as an adaptation option. Stakeholders decided that improving the efficiency of rain-fed crop and livestock production as a climate resilient technique would be more socially acceptable, cost-effective, and technically feasible.

Use of locally observed rainfall records to evaluate planting decisions has increased among farmers in the pilot project area where village-level rainfall monitoring sites had been established. A solid foundation for the uptake of medium range and seasonal forecasts has been established by developing a culture of using locally observed climatic data and simultaneously slowly introducing the farmers to climate forecast products. A project survey carried out in June 2011 showed that demand for medium (10 to 14 days) range and seasonal climate forecasts grew to about 43 to 83.5 percent of the farmers across the four pilot wards. Areas with the highest interest in climate products reflect the influence of the extension workers working with the project.

INDIA—Sustainable Livelihoods and Adaptation to Climate Change

India's economy highly depends on its natural resources, including agriculture, water, and forestry. It faces Implementing Agency **World Bank**

Total Special Climate Change Fund-A Grant

\$8.8 million

Total Cofinancing \$234 million

major threats because of climate change, especially since the impacts of climate change include changes in monsoon variability that entail floods during the monsoon and increasing drought spells otherwise. Thus, climate change will most severely affect the rural population. Wheat production is predicted to decline from 2020 and the Indian Agricultural Research Institute has indicated that for every 1°C temperature rise there may be a loss of 4 to 5 million tons in annual wheat production.

As a strategic response to the expected impacts of climate change, the project aims to improve management of soil moisture through increasing and conserving organic matter, enhancing weather and market information available to farmers, and implementing risk management instruments to cope with crop failure. Furthermore, the project is working to treat groundwater as common property and hence ensure universal, but sustainable, access to this scarce resource. In addition, goat and sheep rearing, backyard poultry, and fish farming in tanks are aiming to enhance livelihood opportunities for marginal groups. The dependency on natural resources will be addressed through support to planned migration and nonfarm livelihoods. Climate resilience in the agricultural sector will be enhanced through integrating crops and livestock in a mixed farming system for fodder and production combined with better animal health service delivery.

ALBANIA, MACEDONIA, AND SERBIA-

Southeastern Europe and Caucasus Risk Insurance Facility

Southeastern Europe and the Caucasus region are highly vulnerable to natural hazards. Ninety percent of Southeastern Europe is located within transboundary river basins, which makes the region highly prone to floods. Because of

climate change, the region is experiencing an increase in weather variability, new extreme values of temperatures and precipitation, and an increase in the frequency and severity of hydro-meteorological disasters. Weather-dependent agricultural exports represent a large portion of these countries' GDP. Homeowners, enterprises, and farmers carry little to no catastrophe insurance and weather risk coverage—this is coupled with the government's inability to assist financially. As a result, this region is largely exposed to fiscal risk caused by natural disasters, which are becoming more

Governments, businesses, farmers, and homeowners need to transfer their risk to the private sector to

frequent and severe because of climate change.

Implementing Agency **World Bank**

Total Special Climate Change Fund-A Grant

\$6 million

Total Cofinancing

\$21.5 Million

financially adapt to greater weather risks created by climate change. With the aim of increasing the number of insured people against weather-related risks, this project is working to establish a catastrophe and weather risk reinsurance program entitled: Southeastern Europe and Caucasus Catastrophe Risk Insurance Facility (SEEC CRIF).

The Special Climate Change Fund grant supports actuarial and probabilistic country weather and climate risk assessments that are necessary to develop insurance pricing and underwriting guidelines. In addition, the grant is funding the implementation of regulatory frameworks to ensure catastrophe and weather risk insurance products comply with national laws and acquiring weather reporting in order to provide timely readings of temperature and precipitation—data needed for parametric weather risk contracts.

The project will fund the development of risk maps, climate risk models, and the crafting of parametric weather risk insurance products, all of which will require the compilation of temperature and precipitation indices. Lastly, this new funding will support public education projects around disaster risk exposure, the benefits of catastrophe and weather risk insurance, and how to acquire it. The Special Climate Change Fund grant will assist in the development of weather risk insurance products, which will enhance the adaptive capacity to climate change in the recipient countries.

NICARAGUA—Adaptation of Nicaragua's Water Supply to Climate Change

Nicaragua remains the second poorest country in Latin America after Haiti. Extreme climate events, food insecurity, biodiversity loss, health risks, and especially the increasing water scarcity are among the most critical climate change impacts in the Central American region. Nicaragua's strategic water resources for

current and future water supplies are vulnerable to the effects of climate change because of the high frequency of extreme weather events, droughts, floods, and hurricanes, in addition to pollution pressures from untreated wastewater, agricultural runoff, and other sources.

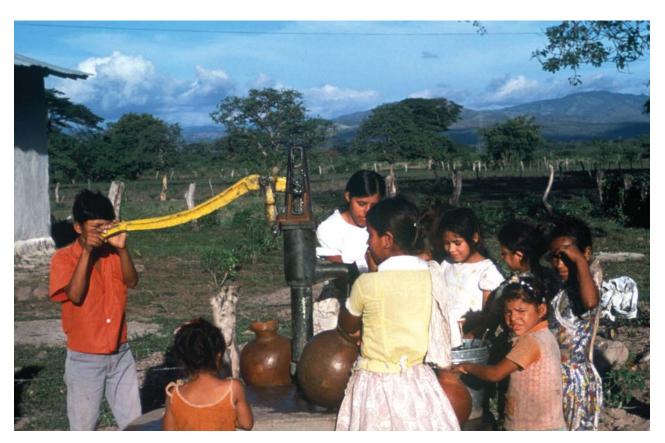
The Special Climate Change Fund-funded project aims to improve Nicaragua's water supply and sanitation sector. The applied strategy is comprised of three components. Firstly, pilot projects support investments in supply- and demand-side measures to increase the resilience of drinking water availability in vulnerable areas through supply-augmenting and demand-control measures, combined with the protection of micro-watersheds and water supply sources from climate-induced droughts and floods. Secondly, coastal wetland protection will be enhanced and the vulnerability to sea-level rise will be decreased in order to reduce climate-induced impacts on

Implementing Agency **World Bank**

Total Special Climate Change Fund-A Grant

\$6.6 Million

Total Cofinancing \$31.5 Million



drinking water supplies in vulnerable areas. The last component represents institutional strengthening for the integration of climate impacts into the water supply and sanitation sector area.

MULTI-TRUST FUND REGIONAL INITIATIVES ON **TECHNOLOGY TRANSFER (Special Climate Change** Fund-B and GEF TRUST FUND RESOURCES)

Implementing Agency

African Development Bank, Asian **Development Bank**, Inter-American, **Development Bank** and World Bank.

Reaffirming the GEF's commitment to harnessing the synergies between adaptation and global environmental benefits, and in line with Climate Convention guidance for Special Climate Change Fund, the GEF approved the following four multitrust fund regional initiatives in 2011-12. These initiatives combine funds from GEF Trust Fund (Climate Change Mitigation Focal Area) and Special Climate Change Fund-B (Technology Transfer window), as presented in Table 2.

Through the pilot centers and networks, Special Climate Change Fund-B contributes toward the following:

(i) strengthening regional partnerships and addressing knowledge gaps to maximize the transfer of relevant technologies for climate change adaptation and climate-resilient development; (ii) integrating appropriate adaptation technologies in national strategies, policies and investment plans; and (iii) demonstrating and deploying adaptation technologies in the context of investment projects. These projects are expected to generate lessons learned to help inform the ongoing process to operationalize the Climate Convention's Technology Mechanism, in particular the Climate Technology Centers and Networks (CTCN).

Below are brief descriptions of these projects and their adaptation technology transfer components.

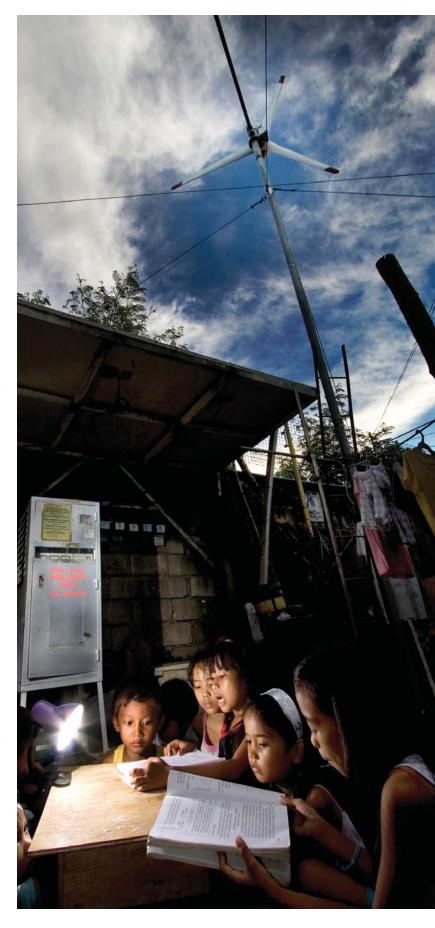
1. Pilot Asia-Pacific Climate Technology Network and Finance Center. The project will support the deployment of technologies for both climate change mitigation and adaptation in the developing countries of the Asia-Pacific region. With respect to adaptation, the project will directly contribute to priority areas on technology transfer, including the implementation of Technology Needs Assessments (TNAs), technology information, and capacity building for technology transfer and enabling environments. The project will

TABLE 2 REGIONAL PROJECTS FOR CLIMATE TECHNOLOGY CENTERS AND CLIMATE TECHNOLOGY NETWORKS

			GEF Financing (\$ millions)			
Title	Region	Agency	GEF Trust Fund	SCCF-B	Cofinancing (\$ millions)	Status
Pilot Asia-Pacific Climate Technology Network and Finance Center	Asia and Pacific	ADB/ UNEP	10.0	2.0	74.7	CEO Endorsed
Pilot African Climate Technology Finance Center and Network	Africa	AfDB	10.0	5.8	95.0	Council approved
Regional Climate Technology Transfer Center	Europe and Central Asia	EBRD	10.0	2.0	77.0	Council approved
Climate Technology Transfer Mechanisms and Networks in Latin America and the Caribbean	Latin America and the Caribbean	IDB	10.0	2.0	63.4	Council approved

focus on piloting innovative financial mechanisms and catalyzing investments in climate change adaptation technologies in priority sectors, such as water, agriculture and food security, health, and coastal zone development.

- 2. Climate Technology Transfer Mechanisms and Networks in Latin America and the Caribbean. The project seeks to pilot institutional frameworks and mechanisms for the development and transfer of lowcarbon, climate-resilient technologies in the energy, transport, agriculture, and forestry sectors, leveraging public and private investments. The components financed under the Special Climate Change Fund-B will support networking, policy support, and demonstration activities for the transfer of adaptation technology, particularly in the agriculture sector.
- 3. Pilot African Climate Technology Finance Center and Network. The project seeks to promote the development and transfer of climate technologies in African countries to contribute to reduced greenhouse gas emissions and greater climate resilience. The components financed under the Special Climate Change Fund-B will contribute toward addressing knowledge gaps, forging partnerships, developing enabling environments, and catalyzing resources for the demonstration, deployment, and diffusion of relevant technologies for climate change adaptation and climate-resilient development.
- 4. Regional Climate Technology Transfer Center. The project seeks to accelerate investments in climate change mitigation and adaptation technologies in EBRD's countries of operations. The components financed under the Special Climate Change Fund-B will leverage resources and pilot financing products for the transfer of adaptation technologies. The project would also enhance regional linkages and collaboration on adaptation technologies.





Lessons Learned From Financing Concrete Adaptation Actions On The Ground

Thanks to the Least Developed Countries Fund and the Special Climate Change Fund, innovative approaches are being promoted among the GEF agencies that integrate adaptation into development, programs, and policies. The GEF has by far the most comprehensive adaptation portfolio considering the number of countries that have benefited through one of the mentioned funds.

Here are some valuable lessons learned on adaptation action based on the GEF's extensive experience managing the adaptation funds.

First: The capacity and knowledge baseline varies significantly among countries. Each country's unique situation must be taken into account before designing an adaptation project. In some cases, a project will include a capacity building component aimed at improving knowledge, collecting missing data, or better processing the data before acting. The adaptation funds allocate the largest share of resources to concrete adaptation actions and investments. Despite the uncertainties about the risks of climate change, this active project portfolio shows that all countries, including the least developed countries, have enough information to implement adaptation actions and use the available funds to finance their plans and start measuring the results and project impacts.

Second: Climate change affects all sectors of development. Adaptation projects financed under these funds are aimed at ensuring that food security, access to drinking and irrigation water, sound public health, coastal infrastructure, and other basic needs are preserved, despite a changing climate and future challenges that have no precedent in human history. The large majority of projects implemented under the GEF-managed adaptation funds address the impacts of climate change on agriculture and water resources. Overall, the adaptation funds project portfolio is aimed at achieving climate-resilient development.

Third: A significant scaling-up of adaptation experiences and much larger resources is needed. These resources can be mobilized and accessed to build on the lessons learned and results achieved from the early experience of GEF-managed adaptation funds projects. The portfolio of these adaptation funds has established solid ground for future adaptation financing and inspires similar initiatives worldwide.

ANNEX | PROJECTS APPROVED UNDER THE STRATEGIC PRIORITY ON ADAPTATION (SPA)1

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
Colombia	Integrated National Adaptation Plan: High Mountain Ecosystems, Colombia's Caribbean Insular Areas and Human Health (INAP)	World Bank	6,170,000	9,500,000	Under Implementation
Regional	Sustainable Management of the Water Resources of the la Plata Basin with Respect to the Effects of Climate Variability and Change	UNEP	1,090,000	51,034,087	Under Implementation
Regional	Integrated and Sustainable Management of Transboundary Water Resources in the Amazon River Basin Considering Climate Variability and Climate Change	UNEP	2,200,000	44,840,090	Under Implementation
Kiribati	Kiribati Adaptation Program - Pilot Implementation Phase (KAP-II)	World Bank	2,070,000	4,800,000	Project Closure
Regional	Implementation of Pilot Adaptation Measures in coastal areas of Dominica, St. Lucia and St. Vincent & the Grenadines	World Bank	2,620,000	3,370,000	Under Implementation
Global	Adaptation Learning Mechanism: Learning by Doing	UNDP	790,000	645,000	Project Completion
Regional	Adaptation to Climate Change - Responding to Shoreline Change and its human dimensions in West Africa through integrated coastal area management.	UNDP	4,360,000	9,729,517	Under Implementation
Hungary	Lake Balaton Integrated Vulnerability Assessment, Early Warning and Adaptation Strategies	UNDP	1,130,000	3,090,000	Under Implementation
Regional	Integrating Vulnerability and Adaptation to Climate Change into Sustainable Development Policy Planning and Implementation in Southern and Eastern Africa	UNEP	1,090,000	1,265,000	Project Completion
Sri Lanka	Participatory Coastal Zone Restoration and Sustainable Management in the Eastern Province of Post-Tsunami Sri Lanka	IFAD	2,100,000	7,569,450	Under Implementation
Global	Community-based Adaptation (CBA) Programme	UNDP	5,510,000	4,525,140	Under Implementation
Mozambique	Zambezi Valley Market Led Smallholder Development	World Bank	1,690,000	21,200,000	Under Implementation
Namibia	CPP Namibia: Adapting to Climate Change through the Improvement of Traditional Crops and Livestock Farming (SPA)	UNDP	1,100,000	5,795,806	Under Implementation

¹ Projects are listed in chronological order based on the date of submission to the GEF Secretariat.

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
India	SLEM - Sustainable Participatory Management of Natural Resources to Promote Ecosystem Health and Resilience in the Thar Desert Ecosystem	UNDP	250,000	14,700,000	Under Implementation
Tajikistan	Sustaining Agricultural Biodiversity in the Face of Climate Change	UNDP	1,100,000	2,100,000	Under Implementation
Uruguay	Implementing Pilot Climate Change Adaptation Measures in Coastal Areas of Uruguay	UNDP	1,100,000	2,922,900	Under Implementation
Yemen	MENARID - Adaptation to Climate Change Using Agrobiodiversity Resources in the Rainfed Highlands of Yemen	World Bank	4,620,000	31,738,000	Under Implementation
Global	Identification and Implementation of Adaptation Response Measures in the Drini-Mati River Deltas	UNDP	1,100,000	984,525	Under Implementation
Global	Adaptation to Climate Change Impacts in Mountain Forest Ecosystems of Armenia	UNDP	1,050,000	1,900,000	Under Implementation
India	SLEM/CPP-Sustainable Rural Livelihood Security through Innovations in Land and Ecosystem Management	World Bank	2,960,000	88,000,000	Under Implementation
India	SLEM - Sustainable Land Water and Biodiversity Conservation and Management for Improved Livelihoods in Uttarakhand Watershed Sector	World Bank	346,000	90,000,000	Under Implementation
India	SLEM-CPP-Integrated Land Use Management to Combat Land Degradation in Madja Pradesh	UNDP	220,000	95,523,750	Under Implementation
Regional	CTI Coastal and Marine Resources Management in the Coral Triangle: Southeast Asia under Coral Triangle Initiative	ADB	2,000,000	28,950,000	Under Implementation
Regional	PAS Strengthening Coastal and Marine Resources Management in the Coral Triangle of the Pacific - under the Pacific Alliance for Sustainability Program	ADB	1,000,000	23,849,000	Under Implementation
Tunisia	Second Natural Resources Management Project	World Bank	700,000	57,900,000	Under Implementation
Global	Reversing Environmental Degradation and Rural Poverty through Adaptation to Climate Change in Drought Stricken Areas in Southern India: A Hydrological Unit Pilot Project Approach (under India: SLEM)	FAO	1,000,000	2,853,563	Under Implementation
TOTAL			49,366,000	608,785,828	

ANNEX II PROJECTS APPROVED UNDER THE LEAST DEVELOPED COUNTRIES FUND (LDCF)¹

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
Bangladesh	Community Based Adaptation to Climate Change through Coastal Afforestation	UNDP	3,740,000	7,100,000	Under Implementation
Bhutan	Reducing Climate Change-induced Risks and Vulnerabilities from Glacial Lake Outbursts in the Punakha-Wangdi and Chamkhar Valleys	UNDP	3,987,555	4,036,224	Under Implementation
Sudan	Implementing NAPA Priority Interventions to Build Resilience in the Agriculture and Water Sectors to the Adverse Impacts of Climate Change	UNDP	3,740,000	3,500,000	Under Implementation
Cape Verde	Building Adaptive Capacity and Resilience to Climate Change in the Water Sector in Cape Verde	UNDP	3,410,000	63,699,027	Under Implementation
Burkina Faso	Strengthening Adaptation Capacities and Reducing the Vulnerability to Climate Change in Burkina Faso	UNDP	3,300,000	20,094,595	Under Implementation
Malawi	Climate Adaptation for Rural Livelihoods and Agriculture (CARLA)	AfDB	3,601,923	6,288,000	Under Implementation
Tuvalu	Increasing Resilience of Coastal Areas and Community Settlements to Climate Change	UNDP	3,696,000	4,500,000	Under Implementation
Djibouti	Implementing NAPA Priority Interventions to Build Resilience in the most Vulnerable Coastal Zones in Djibouti	UNEP	2,359,500	2,405,000	Under Implementation
Zambia	Adaptation to the effects of drought and climate change in Agro-ecological Zone 1 and 2 in Zambia	UNDP	4,284,500	9,804,000	Under Implementation
Sierra Leone	Integrating Adaptation to Climate Change into Agricultural Production and Food Security in Sierra Leone	IFAD	3,019,280	8,626,000	Under Implementation
Haiti	Strengthening Adaptive Capacities to Address Climate Change Threats on Sustainable Development Strategies for Coastal Communities in Haiti	UNDP	3,960,000	9,780,000	Under Implementation
Benin	Integrated Adaptation Programme to Combat the Effects of Climate Change on Agricultural Production and Food Security	UNDP	3,839,000	7,879,900	Under Implementation
Congo DR	Building the Capacity of the Agriculture Sector in DR Congo to Plan for and Respond to the Additional Threats Posed by Climate Change on Food Production and Security	UNDP	3,410,000	4,050,000	Under Implementation

¹ Projects are listed in chronological order based on the date of submission to the GEF Secretariat.

			GEF Total	Total Co-financing	
Country	Project title	Agency	Grant (USD)	(USD)	Status
Vanuatu	Increasing Resilience to Climate Change and Natural Hazards	World Bank	3,000,000	3,150,000	Council Approved
Guinea	Increased Resilience and Adaptation to Adverse Impacts of Climate Change in Guinea's Vulnerable Coastal Zones	UNDP	3,377,000	162,885,000	Under Implementation
Samoa	Integrating Climate Change Risks into the Agriculture and Health Sectors in Samoa	UNDP	2,255,000	2,100,000	Under Implementation
Mali	Enhancing Adaptive Capacity and Resilience to Climate Change in the Agriculture Sector in Mali	UNDP	2,684,000	8,477,300	Under Implementation
Rwanda	Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in Flood Prone Areas	UNEP	3,999,600	12,427,000	Under Implementation
Maldives	Integrating Climate Change Risks into Resilient Island Planning	UNDP	4,999,500	4,851,211	Under Implementation
Liberia	Enhancing Resilience of Vulnerable Coastal Areas to Climate Change Risks	UNDP	3,300,000	4,653,420	Under Implementation
Cambodia	Promoting Climate-Resilient Water Management and Agricultural Practices	UNDP	2,145,000	2,240,350	Under Implementation
Lesotho	Improvement of Early Warning System to Reduce Impacts of Climate Change and Capacity Building to Integrate Climate Change into Development Plans	UNEP	1,963,500	2,721,500	Under Implementation
Mauritania	Support to the Adaptation of Vulnerable Agricultural Production Systems	IFAD	3,960,000	10,473,000	Under Implementation
Niger	Implementing NAPA Priority Interventions to Build Resilience and Adaptive Capacity of the Agriculture Sector to Climate Change	UNDP	3,860,000	10,950,000	Under Implementation
Mali	Integrating Climate Resilience into Agricultural Production for Food Security in Rural Areas	FAO	2,400,000	4,500,000	Under Implementation
Yemen	Integrated Coastal Zone Management	World Bank	4,950,000	10,000,000	Council Approved
Comoros	Adapting Water Resource Management in Comoros to Increase Capacity to Cope with Climate Change	UNDP/UNEP	4,224,000	9,316,318	Under Implementation
Guinea-Bissau	Strengthening Resilience and Adaptive Capacity to Climate Change in Guinea- Bissau's Agrarian and Water Sectors	UNDP	4,543,000	19,954,431	Under Implementation
Sao Tome and Principe	Sao Tome and Principe Adaptation to Climate Change	World Bank	4,873,330	13,173,600	Under Implementation
Lao PDR	Improving the Resilience of the Agriculture Sector in Lao PDR to Climate Change Impacts	UNDP	4,999,995	7,718,548	Under Implementation
Kiribati	Increasing Resilience to Climate Variability and Hazards	World Bank	3,300,000	7,800,000	Under Implementation

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
Tanzania	Developing Core Capacity to Address Adaptation to Climate Change in Productive Coastal Zones	UNEP	3,801,930	67,828,498	Under Implementation
Samoa	Integration of Climate Change Risk and Resilience into Forestry Management (ICCRIFS)	UNDP	2,695,000	2,530,000	Under Implementation
Ethiopia	Promoting Autonomous Adaptation at the community level in Ethiopia	UNDP	5,950,323	24,721,020	Under Implementation
Liberia	Enhancing Resilience to Climate Change by Mainstreaming Adaption Concerns into Agricultural Sector Development in Liberia	UNDP	2,702,040	6,345,122	Under Implementation
Senegal	Climate Change adaptation project in the areas of watershed management and water retention	IFAD	5,632,000	10,175,000	Under Implementation
Burundi	Enhancing Climate Risk Management and Adaptation in Burundi (ECRAMB)	AfDB	3,526,171	15,660,000	Council Approved
Mozambique	Adaptation in the coastal zones of Mozambique	UNDP	4,976,400	9,677,000	Under Implementation
Afghanistan	Building Adaptive Capacity and Resilience to Climate Change in Afghanistan.	UNEP	5,500,000	16,000,000	Council Approved
Sao Tome and Principe	Strengthening the Adaptive Capacity of Most Vulnerable Sao Tomean's Livestock- keeping Households	AfDB	2,321,275	7,650,000	Council Approved
Central African Republic	Integrated Adaptation Programme to Combat the Effects of Climate Change on Agricultural Production and Food Security in CAR	UNDP	3,135,000	5,560,000	Council Approved
Cambodia	Vulnerability Assessment and Adaptation Programme for Climate Change in the Coastal Zone of Cambodia Considering Livelihood Improvement and Ecosystems	UNEP	1,853,500	4,195,000	Under Implementation
Haiti	Strengthening climate resilience and reducing disaster risk in agriculture to improve food security in Haiti post earthquake	FAO	2,999,700	9,329,724	Under Implementation
Gambia	Strengthening of The Gambia's Climate Change Early Warning Systems	UNEP	1,164,350	1,555,000	Under Implementation
Regional*	Sahel and West Africa Program in Support of the Great Green Wall Initiative	World Bank	16,000,000	261,000,000	Council Approved
Maldives	Increasing Climate Change Resilience of Maldives through Adaptation in the Tourism Sector	UNDP	1,815,481	1,650,438	Under Implementation
Nepal	Community Based Flood and Glacial Lake Outburst Risk Reduction	UNDP	6,999,850	18,900,000	Council Approved
Lao PDR	Effective Governance for Small Scale Rural Infrastructure and Disaster Preparedness in a Changing Climate	UNDP	5,302,000	25,927,478	Council Approved

 $[\]hbox{* Multi-Trust Fund Project}.$

Complemen	Dusings sixle	A	GEF Total	Total Co-financing	Chahua
Cambodia	Project title Strengthening the adaptive capacity and resilience ofrural communities using micro watershed approaches to climate change and variability to attain sustainable food security	Agency FAO	Grant (USD) 5,607,800	(USD) 18,805,395	Council Approved
Togo	Adapting Agriculture Production in Togo (ADAPT)	IFAD	6,000,000	13,000,000	Council Approved
Malawi*	Shire Natural Ecosystems Management Project	World Bank	1,650,000	11,736,000	Under Implementation
Lesotho	Adaptation of Small-scale Agriculture Production (ASAP)	IFAD	4,892,074	13,000,000	Council Approved
Timor Leste	Strengthening the Resilience of Small Scale Rural Infrastructure and Local Government Systems to Climatic Variability and Risk	UNDP	5,192,000	24,527,763	Council Approved
Tuvalu	Effective and Responsive Island-level Governance to Secure and Diversify Climate Resilient Marine-based Coastal Livelihoods and Enhance Climate Hazard Response Capacity	UNDP	4,757,500	19,601,596	Council Approved
Bangladesh	Integrating Community-based Adaptation into Afforestation and Reforestation Programmes in Bangladesh	UNDP	6,270,000	41,619,000	Council Approved
Guinea	Strengthening farmers communities liveli- hoods resilience against climate changes in the Guinean Prefectures of Gaoual, Koundara and Mali	UNDP	4,190,000	50,630,000	Council Approved
Sierra Leone	Building adaptive capacity to catalyze active public and private sector participation to manage the exposure and sensitivity of water supply services to climate change in Sierra Leone	UNDP	3,311,000	25,600,000	Council Approved
Gambia	Enhancing Resilience of Vulnerable Coastal Areas and Communities to Climate Change in the Republic of Gambia	UNDP	9,955,000	41,388,000	Council Approved
Niger	Scaling up Community-Based Adaptation (CBA) in Niger	UNDP	4,180,000	13,250,000	Council Approved
Rwanda*	Landscape Approach to Forest Restoration and Conservation (LAFREC)	World Bank	4,449,500	19,560,000	Council Approved
Bhutan	Addressing the risk of climate-induced disasters through enhanced national and local capacity for effective actions	UNDP	12,750,320	45,798,000	Council Approved
Tanzania	Strengthening climate information and early warning systems in Tanzania to support climate resilient development	UNDP	4,510,000	19,790,000	Council Approved
Ethiopia	Strengthening climate information and early warning systems in Ethiopia to support climate resilient development	UNDP	5,500,000	20,750,000	Council Approved

^{*} Multi-Trust Fund Project.

			GEF Total	Total Co-financing	
Country	Project title	Agency	Grant (USD)	(USD)	Status
Malawi	Strengthening climate information and early warning systems in Malawi to support climate resilient development	UNDP	4,510,000	17,136,749	Council Approved
Malawi	Climate Proofing Local Development Gains in Rural and Urban Areas of Machinga and Mangochi Districts	UNDP	6,015,020	36,000,000	Council Approved
Solomon Islands	Solomon Islands Water Sector Adaptation Project (SIWSAP)	UNDP	7,700,000	40,255,000	Council Approved
Uganda	Strengthening climate information and early warning systems in Uganda to support climate resilient development	UNDP	4,510,000	23,664,000	Council Approved
Zambia	Strengthening climate information and early warning systems in Zambia to support climate resilient development	UNDP	4,400,000	23,710,000	Council Approved
Benin	Strengthening Climate Information and Early Warning Systems in Western and Central Africa for Climate Resilient Development and Adaptation to Climate Change - Benin	UNDP	4,510,000	18,087,302	Council Approved
Burkina Faso	Strengthening Climate Information and Early Warning Systems in Western and Central Africa for Climate Resilient Development and Adaptation to Climate Change - Burkina Faso	UNDP	4,510,000	24,305,000	Council Approved
Sao Tome and Principe	Strengthening Climate Information and Early Warning Systems in Western and Central Africa for Climate Resilient Development and Adaptation to Climate Change - Sao Tome and Principe	UNDP	4,510,000	17,850,000	Council Approved
Sierra Leone	Strengthening Climate Information and Early Warning Systems in Western and Central Africa for Climate Resilient Development and Adaptation to Climate Change - Sierra Leone	UNDP	4,510,000	18,389,000	Council Approved
Samoa	Enhancing the resilience of tourism-reliant communities to climate change risks	UNDP	2,200,000	7,100,000	Council Approved
Liberia	Strengthening Liberia's Capability to Provide Climate Information and Services to Enhance Climate Resilient Development and Adaptation to Climate Change.	UNDP	7,513,000	28,428,289	Council Approved
Comoros	Enhancing adaptive capacity and resilience to climate change in the agriculture sector in Comoros	UNDP	10,000,000	35,000,000	Council Approved
Niger	Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the Farmers Field School approach	FAO	4,180,000	15,200,000	Council Approved

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
Burkina Faso	Reducing vulnerability of natural resource dependent livelihoods in two landscapes at risk of the effects of climate change in Burkina Faso: Boucles du Mouhoun Forest Corridor and Mare d'Oursi Wetlands Basin	UNDP	7,700,000	21,407,000	Council Approved
Madagascar	Adapting Coastal Zone Management to Climate Change in Madagascar Considering Ecosystem and Livelihood Improvement	UNEP	6,013,865	11,965,000	Council Approved
Burkina Faso	Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the Farmers Field School approach	FAO	4,191,000	19,470,000	Council Approved
Malawi	Implementing urgent adaptation priorities through strengthened decentralized and national development plans	UNDP	5,060,000	24,500,000	PIF approved
Sudan	Climate Risk Finance for Sustainable and Climate Resilient Rainfed Farming and Pastoral Systems	UNDP	6,380,000	12,200,000	PIF approved
TOTAL			369,294,782	1,711,581,798	

ANNEX III PROJECTS APPROVED UNDER THE SPECIAL CLIMATE CHANGE FUND (SCCF) ADAPTATION PROGRAM (SCCF-A) $^{\rm 1}$

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
Tanzania	Mainstreaming Climate Change in Integrated Water Resources Management in Pangani River Basin	UNDP	1,090,000	1,574,875	Project Completion
Ethiopia	Coping with Drought and Climate Change	UNDP	1,084,550	1,866,667	Under Implementation
Mozambique	Coping with Drought and Climate Change	UNDP	1,046,400	929,840	Under Implementation
Zimbabwe	Coping with Drought and Climate Change	UNDP	1,071,470	1,156,000	Under Implementation
Guyana	Conservancy Adaptation Project	World Bank	4,142,000	16,200,000	Under Implementation
Kenya	Adaptation to Climate Change in Arid Lands (KACCAL)	World Bank/ UNDP	7,401,100	42,170,000	Under Implementation
Regional	Design and Implementation of Pilot Climate Change Adaptation Measures in the Andean Region	World Bank	8,847,700	25,232,000	Under Implementation
Ecuador	Adaptation to Climate Change through Effective Water Governance	UNDP	3,651,500	16,185,432	Under Implementation
China	Mainstreaming Adaptation to Climate Change Into Water Resources Management and Rural Development	World Bank	5,847,600	50,500,000	Under Implementation
Regional	Pacific Adaptation to Climate Change Project (PACC)	UNDP	14,822,500	44,503,799	Under Implementation
Philippines	Climate Change Adaptation Project, Phase I	World Bank	5,782,700	50,450,000	Under Implementation
Mexico	Adaptation to Climate Change Impacts on the Coastal Wetlands	World Bank	5,280,000	19,000,000	Under Implementation
Mongolia	Mongolia Livestock Sector Adaptation Project	IFAD	1,787,500	11,480,000	Under Implementation
Egypt	Adaptation to Climate Change in the Nile Delta Through Integrated Coastal Zone Management	UNDP	4,510,000	12,838,060	Under Implementation
Global	Economic Analysis of Adaptation Options in Support of Decision Making	UNEP	1,100,000	3,500,000	Project Completion
Global	Piloting Climate Change Adaptation to Protect Human Health	UNDP	5,466,654	15,963,559	Under Implementation
Vietnam	Climate-resilient Infrastructure in Northern Mountain Province of Vietnam	ADB/UNDP	3,850,000	145,165,000	Under Implementation

¹ Projects are listed in chronological order based on the date of submission to the GEF Secretariat.

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
Ghana	Integrating Climate Change into the Management of Priority Health Risks	UNDP	2,000,000	55,683,146	Under Implementation
South Africa	Reducing Disaster Risks from Wildfire Hazards Associated with Climate Change	UNDP	3,999,996	30,940,100	Under Implementation
Morocco	Integrating Climate Change in Development Planning and Disaster Prevention to Increase Resilience of Agricultural and Water Sectors	World Bank	4,779,999	26,950,000	Under Implementation
Thailand	Strengthening the Capacity of Vulnerable Coastal Communities to Address the Risk of Climate Change and Extreme Weather Events	UNDP	1,000,000	2,704,772	Under Implementation
Swaziland	To promote the implementation of national and transboundary integrated water resource management that is sustainable and equitable given expected climate change.	UNDP	1,893,650	5,824,900	Under Implementation
Azerbaijan	Integrating climate change risks into water and flood management by vulnerable mountainous communities in the Greater Caucasus region of Azerbaijan	UNDP	3,080,000	7,260,000	Under Implementation
Ghana	Promoting Value Chain Approach to Adaptation in Agriculture	IFAD	2,860,000	8,985,000	Under Implementation
Indonesia	Strategic Planning and Action to Strengthen Climate Resilience of Rural Communities in Nusa Tenggara Timor province (SPARC)	UNDP	5,599,000	54,800,000	Council Approved
Tajikistan	Increasing Climate Resilience through Drinking Water Rehabilitation in North Tajikistan	EBRD	3,219,774	23,896,400	Under Implementation
Nicaragua	Adaptation of Nicaragua's Water Supplies to Climate Change	World Bank	6,600,000	31,500,000	Council Approved
Regional	Sahel and West Africa Program in Support of the Great Green Wall Initiative	World Bank	5,000,000	14,000,000	Council Approved
Regional*	Pilot Asia-Pacific Climate Technology Network and Finance Center	ADB/UNEP	2,000,000	15,000,000	Under Implementation
Regional	Southeastern Europe and Caucasus Catastrophe Risk Insurance Facility (SEEC CRIF)	World Bank	6,050,000	21,500,000	Under Implementation
Colombia	Adaptation to Climate Impacts in Water Regulation and Supply for Bogota's Metropolitan Area	IADB	4,637,325	23,300,000	Council Approved
Honduras	Competitiveness and Sustainable Rural Development Project in the Northern Zone	IFAD	3,412,751	21,000,000	Council Approved
India	Climate Resilient Coastal Protection and Management	ADB	2,000,000	54,681,000	Council Approved
Moldova	Climate Resilience Through Conservation Agriculture	IFAD	4,807,000	13,800,000	Council Approved

 $^{^{\}star}$ Multi-Trust Fund Project.

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
Sri Lanka	Strengthening the Resilience of Post Conflict Reconstruction to Climate Risks in Coastal Communities in North and East Sri Lanka	UNDP	3,499,999	57,266,000	Council Approved
Regional	MENA- Desert Ecosystems and Livelihoods Program (MENA-DELP)	World Bank	3,000,000	12,000,000	Council Approved
Regional	Greater Mekong Subregion Forests and Biodiversity Program (GMS-FBP)	ADB/World Bank	500,000	5,631,000	Council Approved
El Salvador*	Climate Change Adaptation to Reduce Land Degradation in Fragile Micro- Watersheds located in the municipalities of Texistepeque and Candelaria de la Frontera	FAO	1,135,000	3,300,000	Council Approved
India	India: Sustainable Livelihoods and Adaptation to Climate Change (SLACC)	World Bank	8,800,000	234,000,000	Council Approved
Zimbabwe	Scaling up Adaptation in Zimbabwe, with a Focus on Rural Livelihoods, by Strengthening Integrated Planning Systems	UNDP	4,378,000	58,480,000	Council Approved
Philippines	Scaling up Risk Transfer Mechanisms for Climate Vulnerable Farming Communities in Southern Philippines	UNDP	1,210,000	9,306,325	Council Approved
Tunisia	Addressing Climate Change Vulnerabilities and Risks in Vulnerable Coastal Areas of Tunisia	UNDP	6,050,000	55,165,000	PIF approved
Regional*	Enhancing Climate Change Resilience in the Benguela Current Fisheries System	FAO	3,327,500	10,260,000	PIF approved
Kyrgyz Republic	Promoting Climate Resiliency of Water Supplies in Kyrgyzstan	EBRD	5,500,000	28,560,000	PIF approved
Georgia	Enhancing Resilience of Agricultural Sector in Georgia (ERASIG)	IFAD	5,803,500	17,130,000	PIF approved
Lebanon	Sustainable Agricultural Livelihoods in Marginal Areas (SALMA)	World Bank	7,862,398	26,100,000	PIF approved
TOTAL			190,787,566	1,387,488,875	

 $[\]hbox{* Multi-Trust Fund Project}.$

PROJECTS APPROVED UNDER THE SPECIAL CLIMATE CHANGE FUND- TECHNOLOGY TRANSFER PROGRAM (SCCF-B) $^{\!\scriptscriptstyle 1}$

Country	Project title	Agency	GEF Total Grant (USD)	Total Co-financing (USD)	Status
Global	TNA (Technology Needs Assessments)	UNEP	9,000,000	2,855,000	Under Implementation
Jordan	TT-Pilot (GEF-4) DHRS: Irrigation Technology Pilot Project to face Climate Change Impact	IFAD	2,365,020	5,516,000	Under Implementation
Regional*	Climate technology transfer mechanisms and networks in Latin America and the Caribbean	IADB	1,998,150	6,300,000	Council Approved
Regional*	Pilot African Climate Technology Finance Center and Network	AfDB	5,775,000	32,000,000	Council Approved
Global	Enhancing Capacity, Knowledge and Technology Support to Build Climate Resilience of Vulnerable Developing Countries	UNEP	5,500,000	23,000,000	Council Approved
Regional*	Regional Climate Technology Transfer Center	EBRD	2,000,000	12,583,334	Council Approved
TOTAL			26,638,170	82,254,334	

^{*} Multi-Trust Fund Project.

¹ Projects are listed in chronological order based on the date of submission to the GEF Secretariat.





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