

# Progressing Climate Action

**BY 2030**

Climate change  
could push an  
additional  
**132** MILLION  
PEOPLE  
into extreme poverty

**IN 2020**

UP TO **811**  
MILLION PEOPLE  
faced hunger

## The Challenge Ahead

The COVID-19 global pandemic has laid bare the vulnerabilities of global agriculture and food systems. The shock to these systems is particularly felt in low-income countries, especially for smallholder farmers who are already heavily affected by conflict, natural disasters, and climate change.

Global hunger has been on the rise since 2014. In 2020, between **720 and 811 million people** faced hunger – as many as **161 million more than in 2019** – and an additional **320 million people** did not have access to **enough food**. If recent trends continue, up to 660 million people may still face hunger in 2030. At the same time, an increase in extreme weather events, such as floods or droughts, further threatens crops, fisheries, and livestock and deprives millions of people of their livelihoods.

Without urgent action, **climate change could push 132 million additional people into extreme poverty** by 2030, mostly through impacts on agriculture and food security.



# How are Agriculture and Climate Change Linked?

After energy, the agriculture, forestry, and land use sector is the largest contributor to climate change. Yet while agriculture is a major contributor to greenhouse gas (GHG) emissions, it is also highly susceptible to its effects. Opportunities lie ahead in both reducing emissions from agriculture by investing in a more efficient sector and supporting smallholder farmers in adapting to the immediate negative impacts of climate change. Agriculture can and must be part of the climate crisis solution.

Given that nearly 80 percent of the world's poor live in rural areas and rely heavily on agriculture for their food security and livelihoods, climate change and variability has

a disproportionate effect on the smallholder farmers, who produce roughly 35 percent of the world's food. Many smallholder farmers are already seeing impacts from extreme weather events, such as storms and heatwaves, as well as slow-moving events like soil erosion, rising temperatures, and changes in water supply – resulting in a decline in agricultural productivity, the nutritional value of crops, food security, and livelihoods.

Investments in agriculture must be channeled towards reducing the vulnerability of smallholders and enhancing their resilience to shocks, to produce more and better food to meet future demand and reduce the global climate footprint.



**35%**  
of the  
world's  
food is  
produced  
by small  
or family  
farmers.



Up to **1/3**  
of greenhouse  
gas emissions  
come from  
agriculture  
and food  
systems



Photo: World Bank

# How Does GAFSP Help Countries Address Climate Change?

**The Global Agriculture and Food Security Program (GAFSP) supports countries to directly address climate change through both adaptation and mitigation activities.**

In the world's poorest countries, GAFSP supports smallholder farmers, agribusinesses, and governments to adapt to

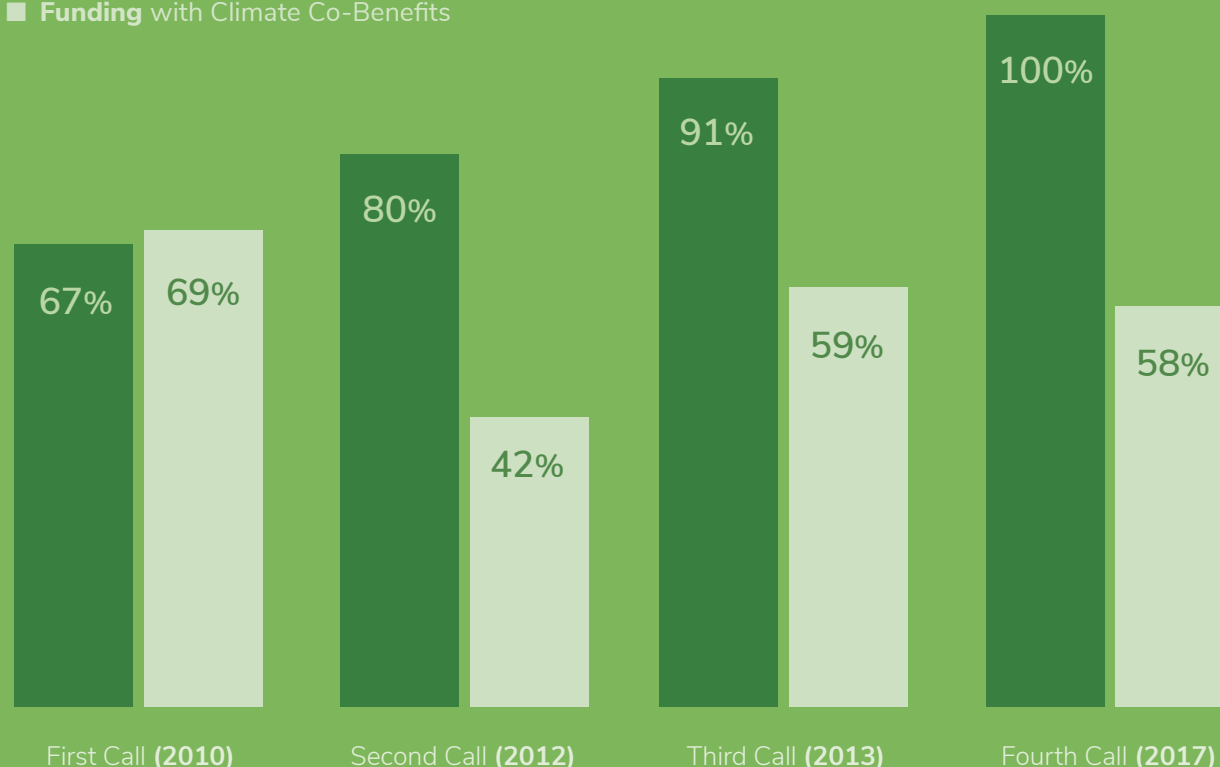
impending climate threats and mitigate food insecurity. Most GAFSP-funded projects increase the climate resilience of agriculture through activities that focus on adaptation and/or mitigation, such as improved climate-resilient seed varieties, drought-resistant mulching, and agroforestry management.

GAFSP provides flexible financial and technical resources to

governments, agribusinesses, and producer organizations, allowing them to choose and tailor interventions best suited to their own contexts. This is reflected in almost all countries prioritizing climate change in their funding applications. In fact, all public sector investments during the most recent **Calls for Proposals** in 2017, 2019, and 2021 included climate adaptation or mitigation activities.

## GAFSP Portfolio in Addressing Climate Co-benefits

■ **Projects** with Climate Co-Benefits  
 ■ **Funding** with Climate Co-Benefits



## How investing in climate has paid off in Bangladesh

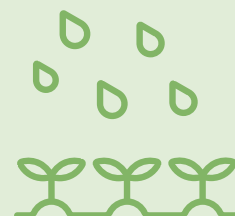
It is a little-known fact that Bangladesh contains the world's largest single tract of mangroves, as well as diverse ecosystems which are critical natural buffers to the impacts of climate change. They are also under threat. At the same time, farmers depend on the land for food and income security, but agriculture is impacted by both drought and saline intrusion due to rising sea levels.

At the Bangladesh Agricultural Development Cooperation (BADC) under the Ministry of Agriculture, Dr. Mizanur Rahman, explains: "There were two main concerns for farmers: the price they could get for their crop, and the availability of quality seed. We decided to work with farmer groups, through demonstrations and adoption programs, to support them in accessing new, high-quality seed that could

### Alternate Wet Dry Irrigation

reduced water use by up to  
**25%**

reduced GHG emissions by  
**50%**



help them adapt to weather extremes."

### The Integrated Agricultural Productivity Project (IAPP)

helped increase agricultural productivity in communities impacted by climate change by introducing climate-smart agricultural technologies, agronomic practices, and crop varieties. For example, the project used alternate wet dry irrigation to reduce water use by up to 25 percent and GHG emissions (specifically, methane) by 50 percent. The project also promoted drought-, heat-, and saline-tolerant varieties of

wheat and rice for farmers facing drought and flash floods.

Over five years, the project benefited nearly 1.5 million smallholder farmers and their families, increasing income levels for crop farmers by 15 percent, and income levels for fishers by 37 percent. Building on the success of the project, the Missing Middle Initiative pilot project, **Increasing Access to Finance for Farmers'**

**Organizations in Bangladesh,** is scaling up the successful initiatives promoting farmers' organizations that emerged as a result of the project.





## Climate-rugged root crop brings new opportunity in Zambia

The starchy root crop cassava is also known as a ‘Rambo root.’ Not only for its rugged appearance, but also because it’s very resilient, able to grow better than other food crops like maize, beans or millet in hot temperatures with little water. Cassava is also the second most important source of carbohydrates in sub-Saharan Africa after maize and is an important industrial crop. Yet in Zambia supplies are low, with low-quality planting materials leading to dwindling yields, pest and disease infestations.

Supported by the GAFSP and the African Development Bank’s flagship Technologies

for African Agriculture (TAAT) program, the US\$ 34.87 million **Agriculture Productivity and Market Enhancement Project (APMEP)** in Zambia brings together the government, private sector, and researchers to bring quality cassava seed and commercial technology to add value to cassava and boost farmer incomes among other outcomes. According to Sylvester Mwanza, APMEP Coordinator: “This technology is going to help strengthen the seed system in Zambia as many industries that are constructed by the private sector want to use cassava for the production of ethanol, starch, and animal feed in future,” emphasizing the need to focus

on opportunities for job creation among the youth.

The project is also strengthening smallholder farmers’ climate resilience through a range of climate-resilient irrigation and water management practices, promoting traditional agronomic techniques such as on-farm water management and livestock management. For example, the project has supported aquaculture development by delivering training, fish cages and pens to over 600 fish farmers, while also distributing over 2.5 million fingerlings to address regular fish farming from lakes and rivers.



Photo: African Development Bank

# The GAFSP Portfolio

As of December 2021, close to 65 percent of public sector projects and 48 percent of GAFSP funding (US\$563) have climate co-benefits – the share of financing that supports climate action through either adaptation or mitigation benefits.

In addition, recent analyses of 70 percent of GAFSP's public sector projects shows that the Program's portfolio is an overall net reducer of GHG emissions, removing 15.4 million tons of carbon dioxide equivalent (tCO<sub>2</sub>e), which offsets the portfolio's overall GHG emissions of 7.8 million tCO<sub>2</sub>e. This means that GAFSP-funded projects contribute to global efforts to mitigate the effects of climate change and address climate resilience.

65%



**Public sector investments**  
with climate co-benefits

48%



**GAFSP funding**  
with climate co-benefits

## Protecting while making the most of natural resources in fragile countries

Almost half of Timor-Leste is covered in lush, diverse forest canopy. Yet agriculture sustains the livelihoods of 64% of the country's labor force and could directly impact forest cover if not well managed. With agriculture contributing to only 10% of the economy, and with unemployment at around 70% with high rates of malnutrition and food insecurity, nearly all households exhaust their home-grown food supplies within nine months.

**The Sustainable Agriculture Productivity Improvement Project (SAPIP)** supports the promotion and implementation of various climate-smart agriculture techniques to strengthen the resilience of smallholder farmers

impacted by climate change while protecting the forest resources. For example, the project supports the training of farmers in watershed management and climate-smart agriculture techniques, such as promoting alternatives to the destructive practice of "slash and burn" agriculture. The project also promotes the adaptation of contour bunding/terracing, water harvesting, inter-cropping, and preparing for reforestation on degraded hillsides. Within the GAFSP portfolio, SAPIP has the highest mitigation potential, with reductions in GHG emissions equivalent to 3.2 million tonnes of CO<sub>2</sub>, due to its strong focus on afforestation and forest management activities.



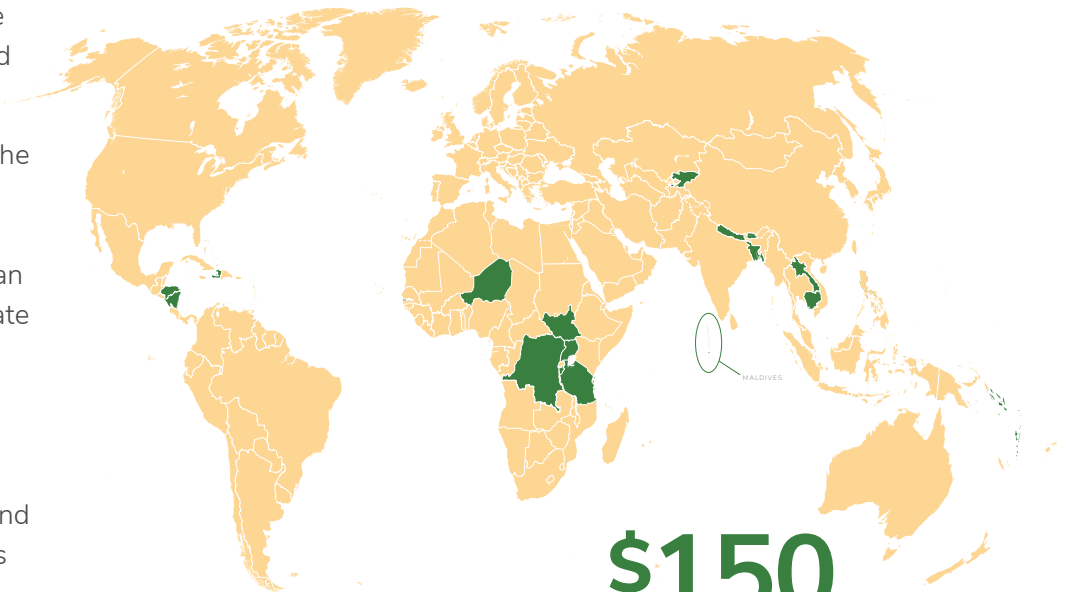
Photo: Yuichi Ishida/UNDP Timor-Leste



Working closely with partners, the GAFSP Private Sector Window supported the development of the Food Loss GHG Calculator, an easy-to-use tool that can estimate the financial and GHG savings from reducing food losses. The tool reported GHG emissions broken down by value chain phase – production, transport, and storage – for 34 crops and foods in 117 countries. GAFSP's initial

GAFSP was originally designed to focus on resilience: support

by the Program's portfolio to date has spanned a wide range of climate-related activities. GAFSP will continue to provide financing for public and private sector investments that strengthen smallholder farmers' climate resilience and build more sustainable and resilient agriculture and food systems.



**\$150**  
million in  
new grants  
allocated across  
**19 countries**  
in 2021

Bangladesh, Bhutan, Burundi, Cambodia , Democratic Republic of Congo, Haiti, Honduras, Kyrgyz Republic, Lao People's Democratic Republic, Maldives, Nepal, Nicaragua, Niger, Senegal, South Sudan, Solomon Islands and Vanuatu, Tanzania, Uganda



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# About GAFSP

Launched by the G20 in the wake of the global response to the 2007-08 food crisis, the **Global Agriculture and Food Security Program (GAFSP)** is a US\$2 billion multilateral financing platform dedicated to improving food and nutrition security by building sustainable agricultural systems in the world's poorest countries.

In line with Sustainable Development Goal 2 (Zero Hunger), GAFSP supports smallholder farmers and their families by strengthening sustainable and resilient agriculture and food systems. Since 2010, GAFSP has provided a range of financial and technical resources – grants, concessional loans, blended finance, technical assistance, and advisory services – to projects along the entire agriculture value chain, from 'farm to table'. These funds are delivered through partnerships with multilateral development agencies and private sector actors with presence and expertise on the ground.

GAFSP investments are about more than just ending food and nutrition insecurity; they help reduce hunger, create jobs and income, reduce poverty and stress on the environment and respond to climate change. Working in partnership with donors, countries, civil society organizations, and development agencies, GAFSP has helped improve the lives of more than 16 million people, including six million women, worldwide.



## GAFSP

GAFSP Coordination Unit  
1818 H Street, NW  
Washington, DC 20433 USA  
[gafsp-info@gafspfund.org](mailto:gafsp-info@gafspfund.org)  
[GAFSPfund.org](http://GAFSPfund.org)

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