



Food and Agriculture Organization  
of the United Nations



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**OFFICE OF** Climate Change,  
Biodiversity and Environment





# Our vision



The Food and Agriculture Organization of the United Nations **office of Climate Change, Biodiversity and Environment** foresees a future where governments, development partners, civil society, academic institutions and the private sector work together to ensure sustainable agriculture and food systems, and a climate-resilient world, free from hunger and malnutrition, that conserves biodiversity and protects the environment.

# How the office supports FAO

**The office of Climate Change, Biodiversity and Environment (OCB)** is one of seven offices within FAO. It operates in close coordination with the Organization's divisions, decentralized units, Members and partners to facilitate global dialogue, mobilize environmental and climate finance, and lead advocacy and actions to promote sustainable agriculture and food security within the global sustainability agenda. OCB also supports FAO's green COVID-19 response and recovery efforts, aiming for immediate impact to sustain and improve livelihoods, while also preparing for more inclusive, environmentally sustainable and climate resilient food systems. By focusing on how the work for a better environment can contribute to better production, better nutrition and better life, the office contributes to FAO's achievements and aspirations.

OCB coordinates initiatives across the organization with Members and partners to reach the targets of the **Sustainable Development Goals (SDGs)** related to climate change and natural resources, as the foundations to achieve other SDG targets, particularly those under SDG 1 No poverty, and SDG 2 Zero Hunger.

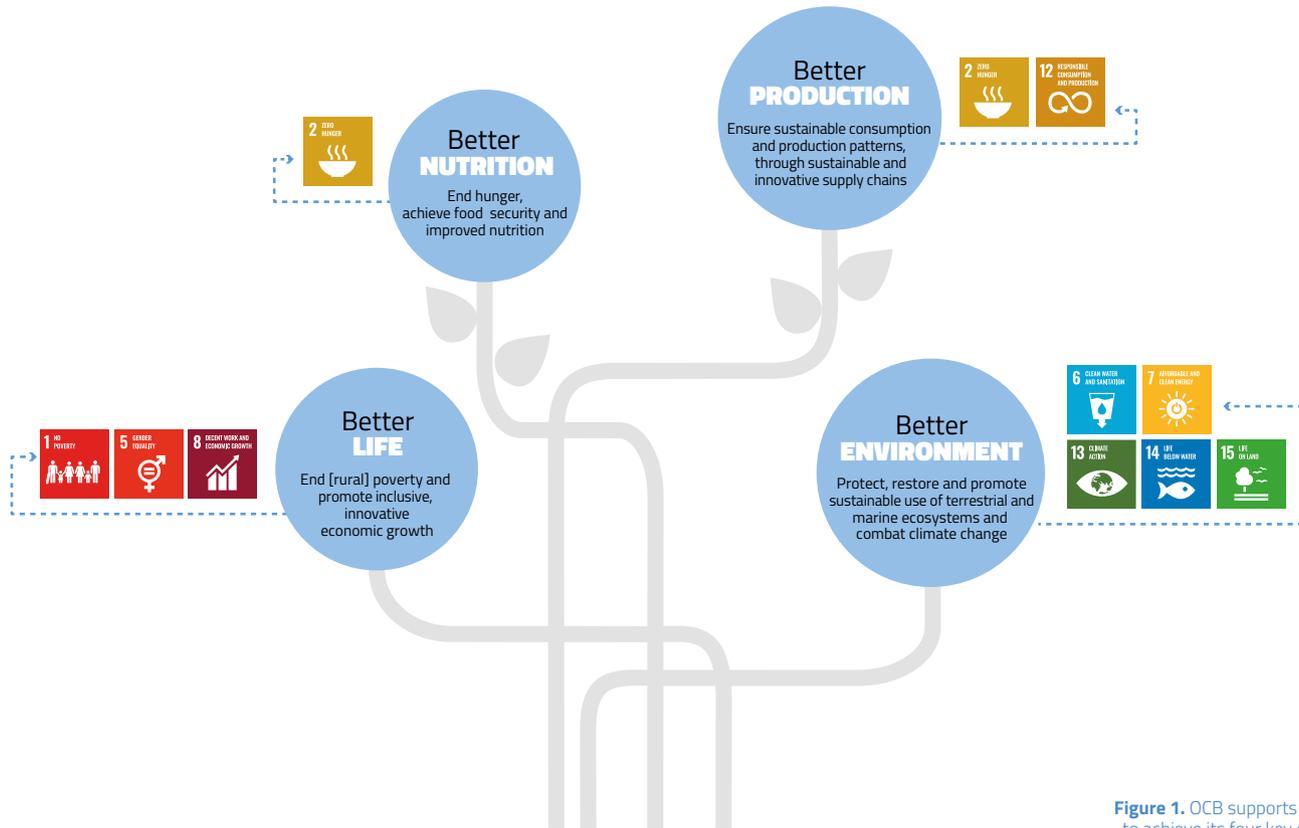
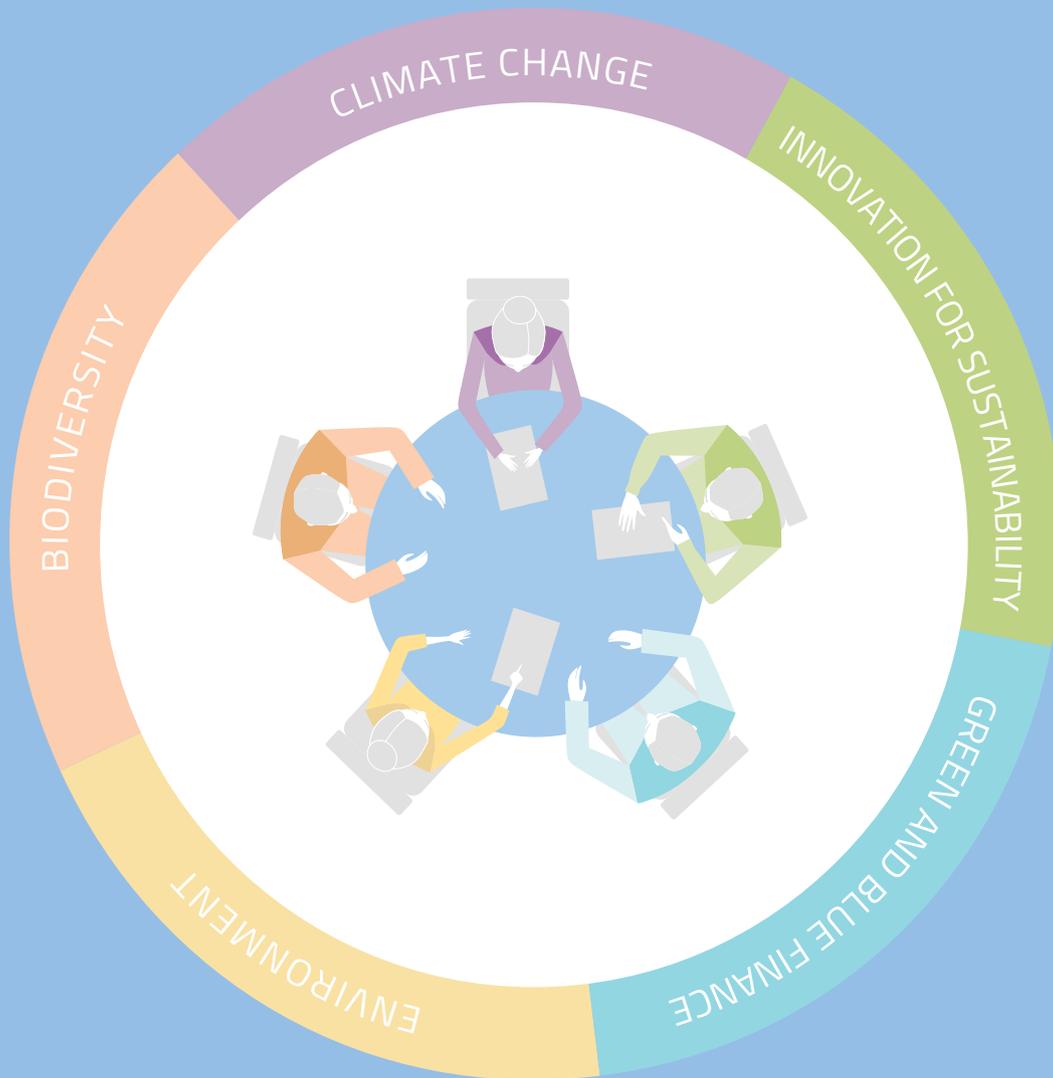


Figure 1. OCB supports FAO to achieve its four key goals



Office of Climate Change, Biodiversity and Environment:

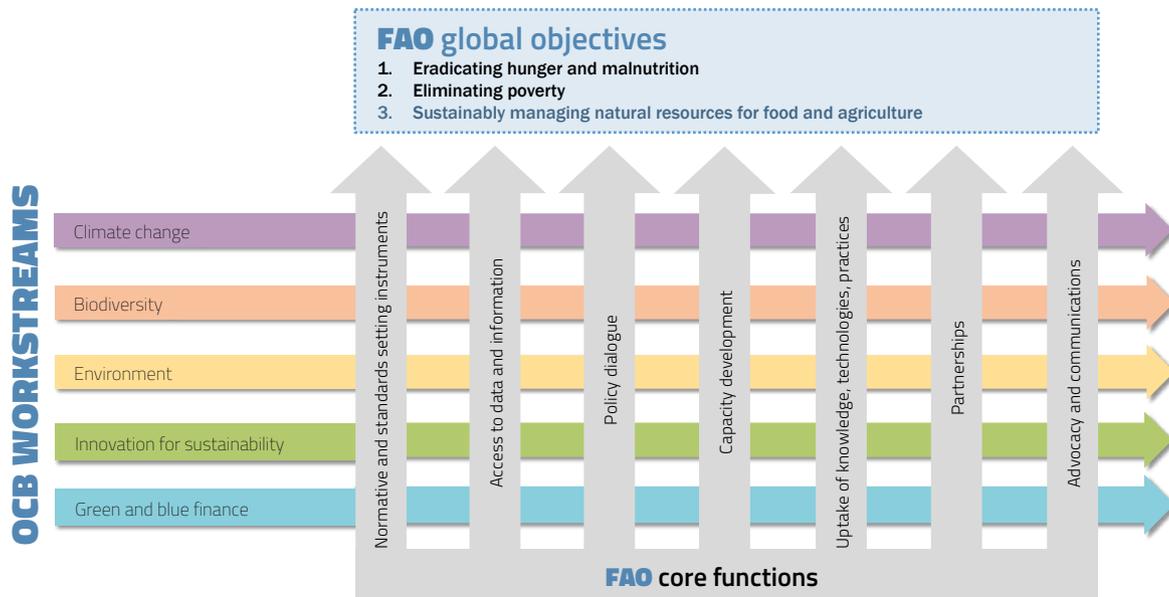
# Workstreams

# What the office does

**OCB** assists countries and stakeholders in responding to the challenges of climate change, biodiversity loss, and environmental degradation, keeping food and agriculture sustainability high on the agenda **through FAO's seven core functions:**

- develop and implement normative and standard-setting instruments;
- improve access to data and information;
- facilitate, promote and support policy dialogue;
- support capacity development at country and regional level;
- improve the uptake of knowledge, technologies and good practices;
- facilitate partnerships;
- advocate and communicate at national, regional and global level.

FAO's works alongside the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention on Biological Diversity (CBD). OCB supports this work through its five workstreams and hosts FAO units liaising with the Green Climate Fund (GCF) and the Global Environmental Facility (GEF). It works in coordination with other multilateral environmental agreements and action plans, and supported by OCB's Youth and Gender groups, mainstreams gender and the involvement of youth in FAO's strategies related to the sustainable use, management and conservation of natural resources for food and agriculture.



**Figure 2.** Through 5 workstreams OCB supports FAO's core functions

# Climate change



The climate change teams coordinate the implementation of FAO's Climate Change Strategy and **Sustainable Development Goal 13** on climate change, as well as FAO's engagement with the UNFCCC to ensure that food security, agriculture, forestry and fisheries are well represented and integrated in the international climate change agenda.

The workstream supports countries to both adapt to climate change and reduce greenhouse gas emissions from food and agriculture, through in-country development of national climate plans and research-based programmes and projects. The focus is on adapting and improving smallholder production sustainably, to ensure that the livelihoods of rural populations are more resilient.

The climate change teams facilitate the design of National Adaptation Plans (NAPs) and Nationally Appropriate Mitigation Actions (NAMAs), and promote Nature-based Solutions, Energy-Smart Food Systems and Climate-Smart Agriculture, to transform and reorient agriculture towards climate resilience and sustainability. In addition, the teams support the climate actions or Nationally Determined Contributions (NDCs) that countries have publicly pledged to achieve, often within broader frameworks and decisions such as the Koronivia Joint Work on Agriculture (KJWA) and promote Disaster Risk Reduction policies and actions. As an integral part of climate change actions, the teams also assist countries and partners in defining strategies and solutions to enable access to modern and clean forms of energy, as a contribution to low-carbon food systems.

## *Promoting climate adaptation, mitigation and resilience*

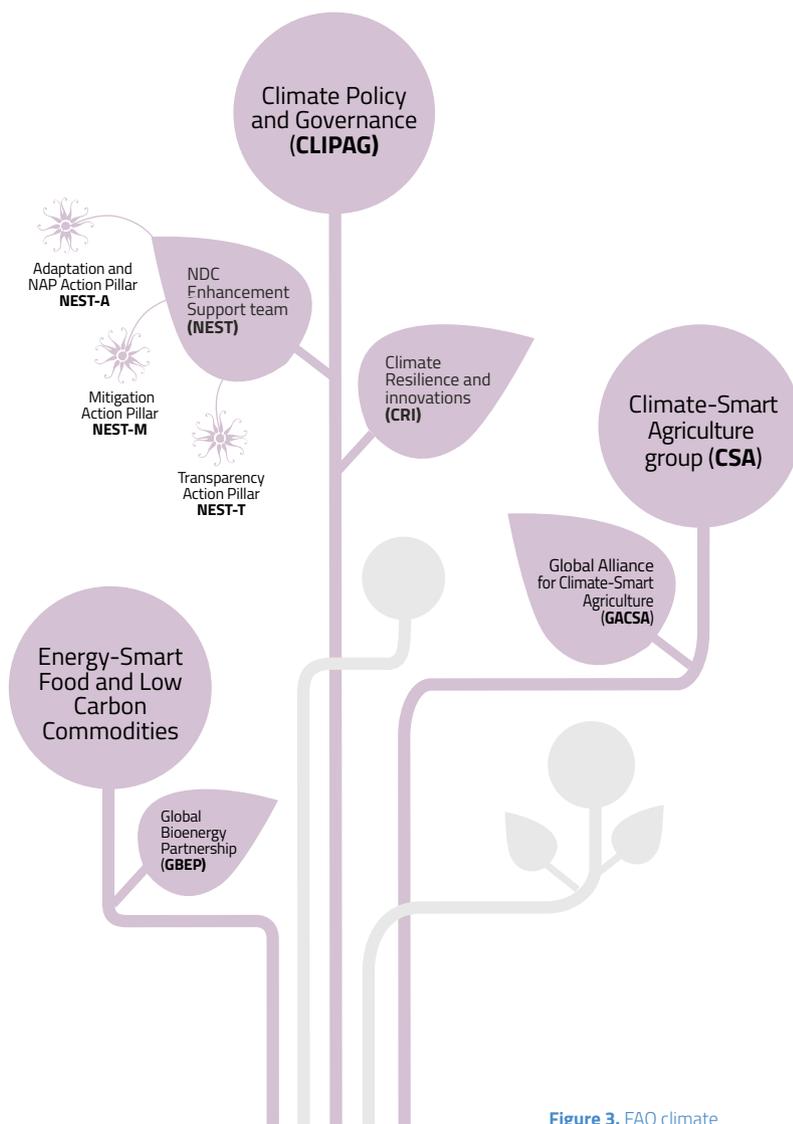


Figure 3. FAO climate change programmes and projects in OCB

# Biodiversity

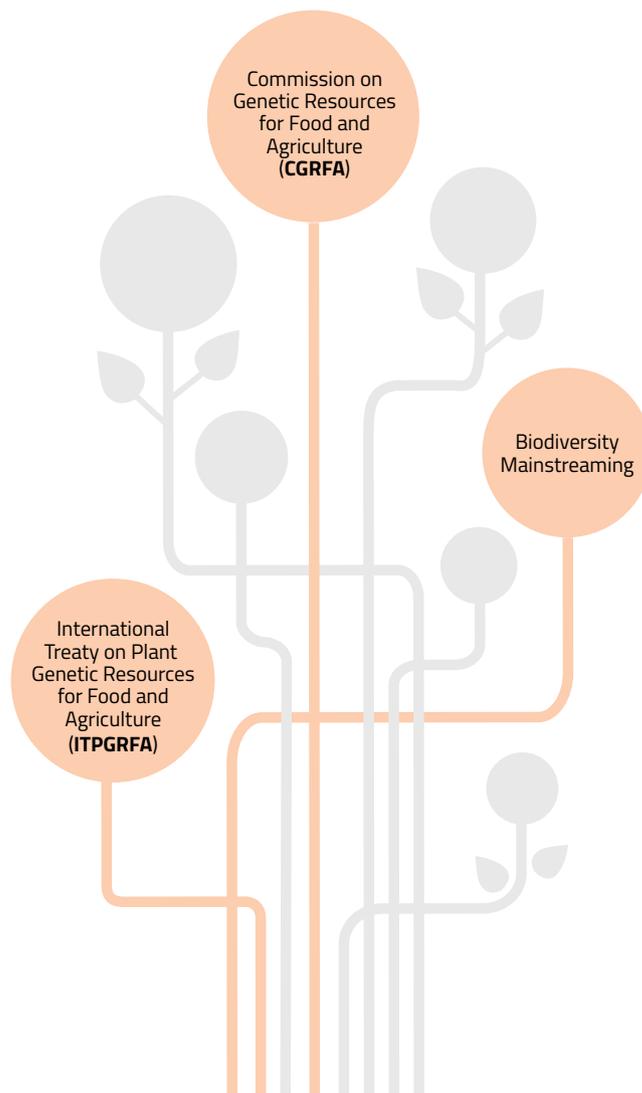


Biodiversity is the basis of food security and FAO promotes its sustainable use for food security, human well-being and development worldwide.

FAO hosts FAO's Commission on Genetic Resources for Food and Agriculture and the International Treaty on Plant Genetic Resources for Food and Agriculture within OCB. Both aim to reach international consensus on policies for the sustainable use and conservation of genetic resources for food and agriculture. The Commission assists countries in assessing and monitoring the state of their genetic diversity for food and agriculture and the causes and effects of biodiversity loss, developing technical and policy guidance for its sustainable use. The International Treaty has established a global benefit sharing system that provides farmers, plant breeders and scientists with access to plant genetic resources.

The biodiversity workstream is responsible for the implementation of FAO's Strategy on Mainstreaming Biodiversity across Agricultural Sectors and its Action Plan. It coordinates FAO's collaboration with the Convention on Biological Diversity and other international conventions and processes to ensure that food security and the agriculture sectors are well represented and integrated in the global biodiversity agenda. Examples of such processes are the Convention's development of a Post-2020 Global Biodiversity Framework, and the United Nations System's development of a common approach to integrating biodiversity for sustainable development into UN policies and programme planning and delivery.

## *Halting biodiversity loss and ensuring its sustainable use*



**Figure 4.** FAO biodiversity programmes and projects in OCB

# Environment



FAO is working to mainstream the environmental sustainability of agriculture and food systems within global frameworks, and to support countries in addressing environmental challenges while ensuring food security and nutrition for all.

The environment workstream hosts the Environmental and Social Management Unit responsible for developing standards, providing advice and ensuring compliance for the management of environmental and social risks in FAO strategies, policies and field projects.

Support provided by this workstream involves assessing and monitoring hidden costs and food security risks in agriculture caused by climate change and environmental degradation and improving agrometeorological services and the use of climate data and information to improve decision-making.

FAO's Agricultural Stress Index System provides tailored support for early action and monitoring to address drought risks in agriculture. It contributes to FAO's Hand-in-Hand Initiative (HiHI) and its Geographic Information System data platform. The HiHI brings together developed countries and countries with high poverty and hunger rates to support their development efforts.

The teams under this workstream also promote the Globally Important Agricultural Heritage Systems (GIAHS) programme and support countries in the development of sustainable and circular bioeconomy strategies and action plans.

*A better environment for agri-food systems*

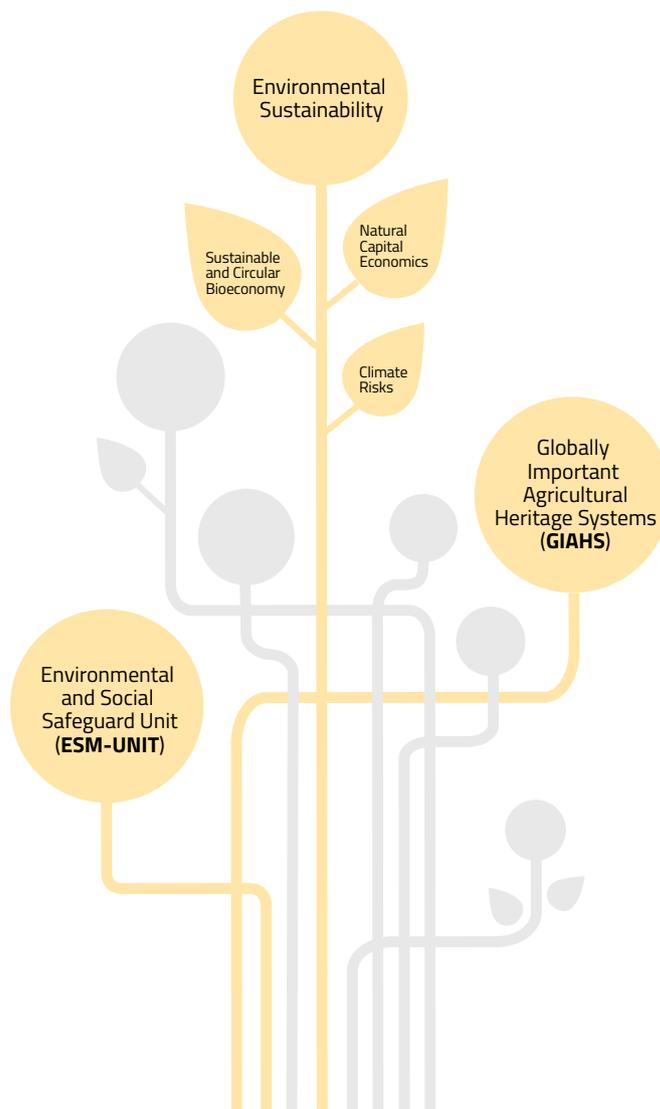


Figure 5. FAO projects and programmes supporting environmental sustainability through OCB

# Green and blue finance



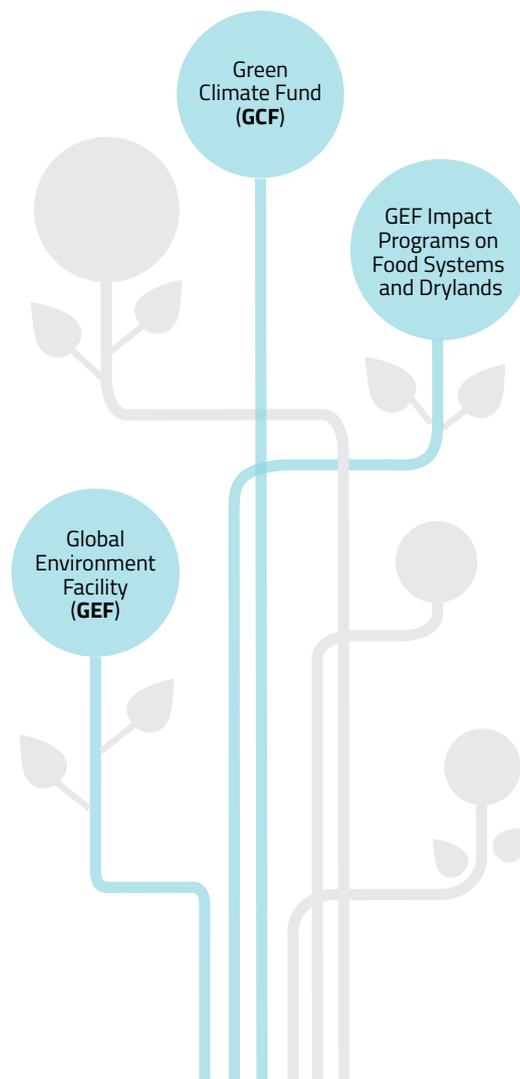
FAO supports countries to access international finance, particularly from the Global Environment Facility (GEF) and the Green Climate Fund (GCF), for their transition towards climate-resilient and sustainable development pathways.

Countries often seek guidance to put in place the necessary policy, technical and financial means to mainstream climate change considerations into agriculture, forestry and fisheries and to establish a basis to shift to sustainable agricultural development.

International climate finance offers opportunities to invest in sustainable agriculture and turn public and private agriculture investments into sound climate-proof investments. FAO is a grant-implementing entity for small- and medium-sized Green Climate Fund projects (up to USD 250 million) with a portfolio of over USD 630 million.

The GEF provides grants for countries to invest in global, environmental projects addressing climate change, biodiversity, land degradation, international waters and chemicals. FAO is among the top four agencies to receive funding to implement GEF projects and programs. The portfolio has rapidly grown since 2002, and now has over 200 projects and a total grant investment value of USD 1 billion.

*Securing sustainable  
and efficient  
development pathways*



**Figure 6.** International funds supporting FAO climate, biodiversity and environmental projects

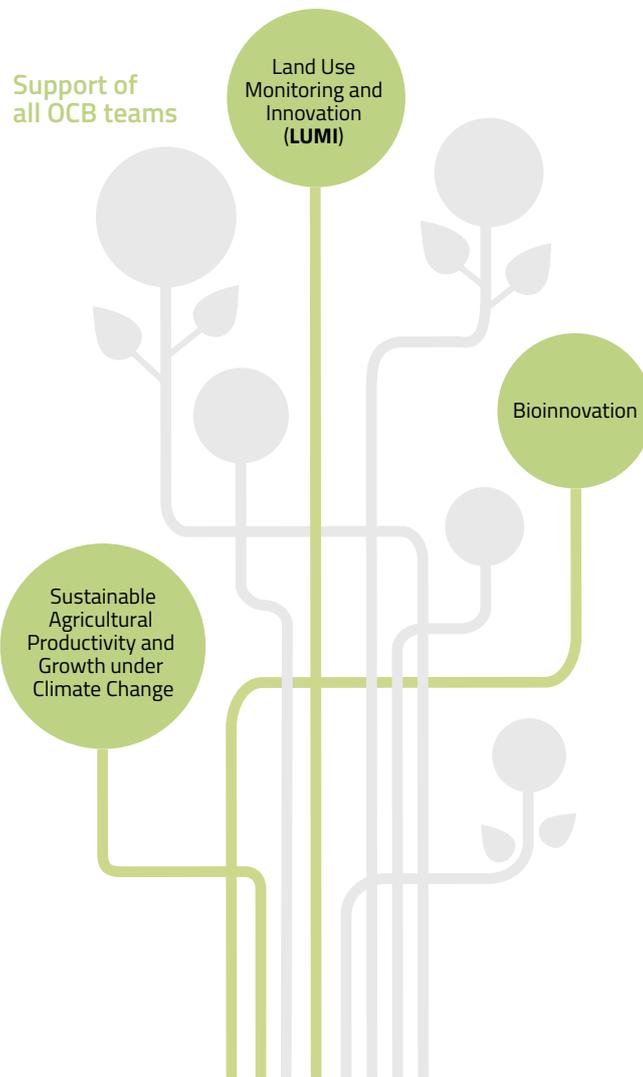
# Innovation for sustainability



This cross-cutting workstream identifies and supports the uptake of innovative practices, methodologies, tools and technologies to support the achievement of climate, environment and biodiversity objectives. The workstream looks at different aspects of innovation for sustainability including digital, biological and socio-economic elements. The aim is to support stakeholders, from policy makers to farmers, in the identification of and transition to sustainable agri-food systems, including urban and peri-urban agriculture under corporate initiatives like the FAO Green Cities Initiative. The work is aligned with FAO's strategic priorities via the office of Innovation and key FAO programmes such the HIHI.

The innovation workstream works closely with external partners such as the World Bank, CGIAR, Rome-Based Agencies, the European Commission's Joint Research Centre and other research institutions, to develop interventions and support countries through the decarbonization of food chains and nature-based solutions for food systems and landscapes. The workstream is involved in the sustainable transformation of food systems, including through bioinnovation and considering the role of the microbiome in agriculture, nutrition and health. It also ensures that other cross-cutting areas, such as poverty, gender, youth and indigenous peoples, are adequately addressed in climate, biodiversity and environmental responses.

*Supporting our objectives through innovation*



**Figure 7.** Work under OCB's innovation workstream

# Facts and figures



Climate change could push **122 million more people**, mainly farmers, into **extreme poverty by 2030**.



**Agriculture absorbs 26 percent** of the economic impact of **climate disasters**, rising to **83 percent for drought** in developing countries.



Agriculture, Forestry and Other Land Use **causes almost one-quarter of human greenhouse gas emissions**. Tropical deforestation and forest degradation account for 11 percent.



Globally, **food systems use about 30 percent of available energy**, mainly in the form of fossil fuels, resulting in 20–25 percent of greenhouse gas emissions from these food systems.



**One-third of the plastic produced globally ends up in our soils** with plastic particles then entering the food chain and the environment.



**More than 6 000 plant species** have been **cultivated for food**. Fewer than 200 make major contributions to food production globally, regionally or nationally.



## Eduardo Mansur

Director and  
green and blue finance workstream lead

## Zitouni Ould-Dada

Deputy Director and  
climate change workstream lead

## Irene Hoffmann

Secretary of the Commission on  
Genetic Resources for Food and Agriculture  
and biodiversity workstream lead

## Lev Neretin

Senior Natural Resources Officer and  
environment workstream lead

## Natalia Alekseeva

Senior Natural Resources Officer and  
innovation and sustainability workstream lead

## Reuben Sessa

Natural Resources Officer and  
gender group lead

Office of Climate Change,  
Biodiversity and Environment

## Food and Agriculture Organization of the United Nations

Rome, Italy



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