

# Farming for Biodiversity

## Be part of the solution



## Biodiversity is key for rural livelihoods

Biodiversity plays an important role in the functioning of ecosystems (i.e. the activities, processes or properties of ecosystems, such as decomposition of organic matter, soil nutrient cycling and water retention), and consequently in the provisioning of ecosystem services. Preserving biodiversity and ecosystem services contributes directly to human well-being and development priorities, creating great synergies between the 20 Global Biodiversity Targets and the Global Sustainable Development Goals.

Rural people depend on natural resources for their livelihoods, relying on a range of natural assets from their ecosystems and biodiversity for food, fuel and much else. Productive and sustainable agricultural systems need clean water, healthy soil, and a variety of genetic resources and ecological processes. Biodiversity is also important for enhancing the resilience of poor farmers and indigenous peoples to climate change, pests, diseases and other threats.

A woman with dark hair, wearing a blue short-sleeved shirt with a white collar and a gold necklace, is working in a forest. She is holding and examining a large, dark, fibrous mass of soil and roots. The background is a lush green forest with many trees and foliage.

## Unsustainable agriculture is a major cause of biodiversity loss

Agricultural production, as currently pursued, is a source of 24% of greenhouse-gas emissions, 33% of soil degradation, and 60% of terrestrial biodiversity loss. Unsustainable farming practices, such as deforestation, the destruction of wetlands and aquatic environments, and overfishing are key threats to biodiversity. Farming is a major driver of agrobiodiversity loss, too, as the intensification of food production is narrowing the genetic diversity of the plants and animals on which we rely for food and nutrition. Agriculture is clearly associated with all the five primary threats to biodiversity, i.e. climate change, habitat change, invasive alien species, nutrient loading and pollution, and unsustainable overexploitation of natural resources, as identified by the Convention on Biological Diversity (CBD).



## We need innovative solutions!

Are farming and biodiversity then inevitably incompatible? The simple answer is, no. But solutions rely on major shifts in policy, practice, behaviours, attitudes, and knowledge to explore how we can do farming for biodiversity. Although the world is far from achieving the Aichi Biodiversity Targets set for 2020, there is a growing global movement for positive change in behaviors and attitudes towards natural resources. The depth and breadth of response to the Farming for Biodiversity Solution Search is a testament to this. Through this contest, over 300 innovative and replicable ideas have been identified that connect agriculture, livelihood and the environment.

These game-changing solutions are bringing farming into harmony with the natural environment to protect and increase the biodiversity of surrounding plants, animals, and microbes on the agricultural land itself. They highlight sustainable land use management practices that promote the natural balance and benefits of biodiversity. They promote alternative pest control, fertilization, and waste management to protect water sources and ecosystems.

They address human/wildlife conflicts and put in place livestock control measures to protect both flora and fauna. They bring new-found economic benefits and recognition for traditional varieties, knowledge, and practices. They celebrate the potential of youth and women farmers to drive change.

Because land degradation and fragmentation are at the heart of the habitat loss that threatens biodiversity, most of the projects address technical aspects associated with protecting or restoring land, water, or forest systems, often in combination. Innovators employ numerous methods, with an emphasis on organic farming, integrated farming, and conservation agriculture to replace the overuse of chemical fertilizers and pesticides, and restore ecosystems. They take a better control of waste and crop residues, including turning them into compost, animal feed, or biofuel. They plant trees planting and apply agroforestry, with incentives (e.g., more food production, nutrition, income generation, skills) for local communities to benefit from the sustainable use and preservation of forest systems.

# Recommendations to donors and policy makers

Based on the innovative solutions surfaced by the contest, our recommendations to donors and policy makers are the following:

- Create enabling environments through policies, social structures, and financial incentives that support biodiversity stewardship with agricultural production such as organic farming.
- Foster community solutions to farming for biodiversity with enabling policies and funding to support tested initiatives, proof of concept, and new technologies and innovations for community-based and community-driven programs.
- Invest in indigenous communities, youth, and women as agents of change in biodiversity conservation and agricultural/economic development. Design programs targeting women and older generations who are key in the valuation of traditional ways and the intergenerational transfer of indigenous seeds, breeds, and knowledge.
- Work with policy actors from local and regional levels to inform and align with national and international strategies for conservation, agricultural development, and economic development.
- Beware of and eliminate the subsidizing of policies (e.g., support for monoculture, overproduction, high use of chemical fertilizers/ pesticides) that harm biodiversity and its linkages with food production in the name of increased productivity. Introduce the polluter-pays-principle for agriculture.
- Set up agricultural advisory services and establish farmer-to-farmer learning programmes to scale up and scale out sustainable innovations and to demonstrate that biodiversity and increased food production can, and must, be compatible.
- Donors, governments should work in partnership with business to fund incentives (e.g., direct payments, academic certification, prizes, other recognitions) that reward environmentally and economically sustainable farming, so that it becomes an occupation of choice.
- Establish participatory research programmes and human-centered design models, putting leaders and communities at the center of problem solving and change, so that they truly become transformational.
- Highlight solutions through rewards, scholarships, networks, mentoring programs, social marketing campaigns, and events to encourage young people to engage in farming for biodiversity through strategies that integrate business development, financial inclusion, new technologies, communications, and innovative linkages.
- Take a cross-sectoral approach in planning and use the 'Guidance on agriculture, crop and livestock' of the Cancun declaration on mainstreaming the conservation and sustainable use of biodiversity for well-being when addressing biodiversity and food systems. Consider how broader social, political, economic, ecological, and physical dimensions (e.g., urbanization, farmland, forests, water sources) fit together and affect natural resource use and management.

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## Project Partners



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