

IFAD: a key player in adaptation to climate change



The impacts of climate change are already tangible in many regions and they are projected to become even more severe in coming years. This will have environmental, social and economic consequences.

The United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, which represent the milestones of the global policy response to climate change, are based on two pillars: mitigation and adaptation. While mitigation was at the core of climate change action during the 1990s, since 2000, greater emphasis has been placed on adaptation. This is now perceived by policy and decision makers as a crucial element in coping with the adverse impacts of climate change.

Adaptation to climate change

'Adaptation' includes all activities that help people and ecosystems reduce their vulnerability to the adverse impacts of climate change and that minimize the costs of natural disasters. There are no unique solutions for adaptation. Ad hoc measures need to be tailored to specific contexts, such as ecological and socio-economic patterns, and to geographical location and traditional practices.

Least developed countries (LDCs) are expected to suffer most from the adverse effects of climate change, as they are largely dependent on vulnerable sectors such as agriculture, fisheries and forestry. Moreover, they lack the human, institutional and financial capacities to protect themselves. Thus, in these countries, adaptation to climate change represents not only an environmental need but a development priority if the Millennium Development Goals are to be achieved.

Acknowledging the particular situation of LDCs, UNFCCC decision 5/CP.7 of the seventh Conference of the Parties (COP) established a LDC work programme, including the preparation of the National Adaptation Programmes of Action (NAPAs). These identify the most urgent and immediate adaptation needs that must be met in order to address climate change. Of the NAPAs prepared to date, agriculture has been identified as a priority sector of intervention.

Agriculture's role in addressing climate change

Agriculture plays a crucial role in addressing climate change. Because it is simultaneously a source of – approximately 20 per cent of the total, with methane and nitrous oxides being the largest emissions – and a sink for greenhouse gases (GHGs), agriculture offers intervention possibilities for both mitigation and adaptation.

Changes in extreme weather events, floods, droughts and increases in temperature negatively affect crop and animal yields, as well as agroecosystem resilience. Especially in LDCs, the losses of crop productivity and livestock deaths associated with further global warming represent a serious threat not only to food security but also to national economies. For this reason, adaptation in the agricultural sector is fundamental to reducing vulnerability and ensuring sustainable development.

Regarding adaptation, the main areas of intervention are the livestock sector, crop production (cropping systems), risk management and capacity-building.

Major adaptation activities in the agricultural sector include:

- adoption of new cultivars or crop varieties;
- weather forecast to increase preparedness for extreme events;
- risk management;
- new methodologies to combat land degradation;
- improvement of water conservation and irrigation.

Regarding mitigation, agriculture can reduce GHG emissions by promoting energy efficiency and clean energies, reducing deforestation or changing land use, and promoting sustainable agricultural practices such as rehabilitation of degraded lands, water conservation and management and increase in biomass. The UNFCCC emphasizes the roles of land use, land-use change and forestry (LULUCF) as a means of protecting carbon stocks and reducing GHG emissions.

IFAD's role in adaptation to climate change in the agricultural sector

In the *IFAD Strategic Framework 2007-2010*, the organization acknowledges climate change as one of the factors causing rural poverty and as one of the challenges it is expected to address. However, the theme of adaptation to climate change is not new to IFAD.

In its past operations, the organization has gained experience regarding climate change through its efforts to increase the resilience of people in rural areas. By adopting risk management approaches and putting the objective of reducing vulnerability at the core of its programmes, it has sought to empower rural people to improve their own livelihoods and overcome poverty.

IFAD takes a two-pronged approach to adaptation:

- biophysical adaptation, which implies identification of and support to promising research on appropriate resilient technologies to address climate variability; and
- changes in farming/land-use systems in response to market signals, for example emerging bioenergy markets.



As a specialized United Nations agency dedicated to eradicating rural poverty in developing countries, the International Fund for Agricultural Development (IFAD) supports programmes and projects with strong natural resource management components. In particular, efforts to combat deforestation, soil degradation and desertification are central to IFAD's operations. All country strategic opportunities papers, which guide IFAD's country programmes, focus on an integrated approach to improving livelihoods through better access to natural resources and their sustainable management.

In 2001, the Council of the Global Environment Facility (GEF) named IFAD a GEF executing agency in recognition of its expertise in land degradation. IFAD's flexible programme approach and long-term lending framework are

conducive to close collaboration with the GEF in addressing global environmental concerns while meeting local development needs.

Although its main comparative advantage for the GEF relates to land degradation, IFAD has developed experience in other agroecological settings under various GEF focal areas, such as biodiversity, climate change and sustainable forest management (SFM). The IFAD-GEF partnership has enabled the creation of mutual synergies. Building on IFAD's experience, the GEF is likely to widen its range of intervention possibilities in degraded ecosystems and post-conflict situations. Further, the organization's flexible programme approach and long-term lending framework are conducive to close collaboration with the GEF in addressing global environmental concerns while meeting local development needs.



Participatory coastal zone restoration and sustainable management in Sri Lanka

IFAD with the Government of Sri Lanka and the World Conservation Union (IUCN) has developed a project to promote the restoration and sustainable use of ecosystems along the east coast of Sri Lanka, that were damaged by the December 2004 Indian Ocean tsunami. This project has an adaptation component financed under the SPA. The project plans to integrate vulnerability assessments and adaptation measures for climate change in accordance with the first national communications under the UNFCCC. The long-term goal of the project is to rehabilitate tsunami-affected ecosystems to provide full ecosystem services in Sri Lanka, including adaptation against extreme climatic events. The initial emphasis of this seven-year project is on development of a scientific, low-cost, community-based approach to rehabilitate three key coastal ecosystems at specific sites – mangroves, coastal lagoons and sand dunes – and facilitate the replication of these techniques all along the east coast. The project will implement a two-pronged strategy to demonstrate that replication is technically feasible at other sites and to mainstream ecosystem restoration in the reconstruction process as a requirement of government policy.

The key activities on adaptation include:

- agronomic management;
- water management;
- crop management;
- drought preparedness;
- alternative enterprises;
- post-harvest systems;
- emergency and contingency plans.

Some specific interventions include:

- switching to 'no-tillage' or 'low-tillage' techniques to preserve carbon stored in soil;
- reducing methane emissions from rice production through better tillage practices, water management and crop rotation;
- using nitrogen fertilizer more efficiently to reduce nitrous oxide;
- improving land use and management practices;
- promoting sustainable forest management to reduce emissions from land degradation and deforestation;
- implementing sustainable coastal management and sustainable fisheries.

As agriculture has been identified as a priority sector of intervention in most NAPAs and National Communications to the UNFCCC, IFAD will play a key role in mainstreaming adaptation in this sector. This role is further illustrated by IFAD's comparative advantage through its work on

land degradation, rural development and integrated land management.

In the light of IFAD's experience, the inclusion of land-use, land-use change and forestry within the GEF climate change focal area widens the organizations' comparative advantage in the field of climate change.

IFAD/GEF support to adaptation

The GEF supports actions to address climate change by financing enabling, mitigation and adaptation activities. As a GEF executing agency, IFAD can also assist developing countries in accessing GEF grants for adaptation. There are currently three international financing sources for adaptation, all administered by the GEF: the Least Developed Countries Fund (LDCF), the Special Climate Change Fund (SCCF), and the Piloting an Operational Approach to Adaptation (SPA) under the GEF trust fund. The Adaptation Fund established under the Kyoto Protocol – financed with the 2 per cent of the certified emission reductions from Clean Development Mechanism projects – will offer additional support to adaptation.

Under the IFAD/GEF-4 engagement strategy, IFAD has committed to prioritizing climate change, with particular focus on adaptation. One of the thematic drivers of IFAD/GEF involvement in the area of climate change consists in exploring links between sustainable land management operations and climate change activities.

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