Act fast, get it right and make it work

Food security can't wait, neither can action on climate change

Act fast

Reduce emissions, remove greenhouse gases and ensure food security

According to the 2007 *Synthesis Report of the Intergovernmental Panel on Climate Change* (IPCC), the agriculture and forestry sectors are responsible for a third of green house gas emissions (GHG) and yet these same sectors also hold an enormous potential to reduce emissions and also absorb carbon in vegetation and soils.

Agriculture can be part of the mitigation solution and the sector deserves to be anchored in the implementation of international agreements. Reducing the environmental footprint of agriculture while meeting the growing demand for food, fuel and fiber can be done.

Some mitigation options, particularly those related to soil carbon sequestration can contribute to both food security and adaptation goals. Reduction and removal of carbon can also be achieved by improving cropland and grassland management, and restoring degraded soils.

Around 13 million hectares of forests are lost annually due to deforestation causing 17 percent of global GHG emissions *(FRA 2005, IPCC 2007)*. Reducing Emissions from Deforestation and forest Degradation (REDD) including sustainable forest management, forest conservation and enhancement of forest carbon stocks also can be an immediate answer.

Get it right

Adapt food systems to climate change

As the number of hungry in the world surpasses one billion, ensuring adequate safe and nutritious food for all will require food systems to adapt to climate change. Adaptation of the agriculture, forestry and fisheries sectors to climate change will be costly but necessary for food security, poverty reduction and ecosystem services.

Acting now rather than later could reduce the vulnerability of hundreds of millions of farmers, and forest-dependant people who are already food insecure especially smalholder and subsistence farmers, pastoralists and fisherfolk, women and indigenous peoples.

No other sector is more sensitive to climate change than agriculture and no other sector contributes so directly to the provision of food and livelihoods of the majority of the poor in developing countries. That's why specific targeting of agriculture within adaptation efforts, and their financing, is needed so that the sector can achieve its multiple roles.

Concrete steps to face future risks of climate change impacts include developing climate change impact assessments, encouraging better water management, soil conservation, resilient crops and trees and improving weather and climate forecasting as well as further developing disaster risk management.

Make it work

Capture synergies between food security and mitigation

Potential synergies among food security, adaptation and mitigation from land-based practices in developing countries could generate high benefits to address the high demands placed on these sectors.

However, some mitigation actions may not help adaptation efforts and can sometimes conflict with food security goals. Strategies and financing mechanisms will be needed that enable these multiple benefits to be produced and used by rural producers.

The most promising mitigation options include: sustainable forest, cropland and rangeland management, agroforestry, and restoration of degraded and organic soils.

FAO addresses climate change

From global impact assessments to national and local action, FAO promotes adaptation and mitigation in agriculture, fishery, forestry and other sectors as an integral part of development. FAO supports the integration of adaptation and mitigation into food security planning and policy advice, including institutional and technical capacity building. It fosters better adaptation practices and sustainable livelihood coping strategies including gender-sensitive approaches. FAO also actively supports the UNFCCC process.

Knowledge management and sharing

FAO plays an active role in raising awareness, disseminating information and providing a neutral forum for discussion of climate change and food security linkages.

Forum for discussion: Fostering technical and policy-relevant discussions on climate change issues through its Regional Commissions, conferences, stakeholder forums and wide range of collaborative partnerships on global issues and key programmes.

Data management: Managing climate change related databases and data harmonization, e.g. through the Global Forest Resources Assessment (www.fao.org/forestry/fra), the Global Terrestrial Observation System (www.fao.org/gtos), the Global Land Cover Network (www.glcn.org), and agroclimate databases (www.fao.org/nr/climpag).

Communication and awareness raising:

- Sharing knowledge related to climate change and the agricultural sectors through publications, Web sites, e-newsletters, discussion forums, audiovisuals.
- Fostering communication strategies and tools to support climate change adaptation in rural areas through the “Communication for Sustainable Development Initiative”.
- Developing activities and programmes to raise awareness and involve children and youth in climate change related issues with other UN agencies (including the UNFCCC and UNICEF) and civil society organizations (www.fao.org/climatechange/youth).

Technology transfer

FAO fosters the introduction of more sustainable cropping, livestock, forestry and fisheries management systems linking the need for food security with environmental concerns as well as climate change adaptation and mitigation.

- Promotion of sustainable intensification of crop and livestock production in the favorable savannahs of Western Africa, coupled to conservation agriculture (CA) and Integrated Production and Pest Management as well as to Integrated Plant Nutrient Management introduced through farmer field schools.
- Improvement of soil organic matter to create resilience to drought and to improve livelihoods.
- Irrigation modernization programmes: www.watercontrol.org/about/about.htm.
- Promotion of sustainable rangeland and forage management in Africa, Latin America and Central Asia and the Livestock, Environment and Development Initiative (www.fao.org/ag/againfo/programmes/en/lead/lead.html).
- Promotion of improved use of biogas technology, especially in Asia and Latin America.
- Pilot project on the potential of Payments for Environmental Services for climate change mitigation in agropastoral systems.
- Implementation of the Code of Conduct for Responsible Fisheries and the ecosystem approach to fisheries and aquaculture.
- Facilitating sustainable forest management by supporting development and implementation of best forestry practices, such as for fire management, reduced impact logging, forest law enforcement, including integrating climate change issues in national forest programmes and management plans, etc.
- Involvement in projects covering 16 countries under the thematic window “Environment and climate change” of the UNDP-Spain MDG Achievement Fund.
- Development of a model to measure the impact of agriculture and forestry projects on GHG and carbon sequestration (Ex-ante Appraisal Carbon-balance Tool - Ex-ACT).

Country support

FAO supports countries through cross-sectoral field projects and programmes related to impact assessment, climate change adaptation and mitigation and the development of policy guidelines.

Mainstreaming: Integrating climate change adaptation and mitigation strategies into agricultural, fisheries, forest management and national food security plans and programmes, e.g. through the Pacific Programme for Food Security and Sustainable Livelihoods.

Impact assessment: Assessing the impacts of climate change on agriculture and food security, e.g. in Morocco and several Low-Income Food-Deficit Countries (LIFDC). (http://www.fao.org/climatechange/53599/en/) Exploring the links between gender, climate variability and adaptive responses and developing a methodology for gender sensitive adaptation in India. (http://www.fao.org/climatechange/54818en/).

Capacity Building: Enhancing national and local capacities in agriculture, livestock, forestry and fisheries for disaster risk reduction, climate risk management and climate change adaptation through community participation in Bangladesh and Nepal and through the Global Initiative for Plant Breeding to develop drought-, flood- and salt- resistant crop varieties.

Working together

UN-REDD PROGRAMME

The UN-REDD Programme is a collaborative partnership between FAO, UNDP and UNEP launched in September 2008 which supports countries to develop capacity to **R**educe **E**missions from **D**eforestation and forest **D**egradation (REDD) and to implement a future REDD mechanism in a post- 2012 climate regime. Within the partnership, FAO supports countries on technical issues related to forestry and the development of cost effective and transparent Measurement, Reporting and Verification (MRV) processes for emission reductions.
www.un-redd.net

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