International Federation of Agricultural Producers

FIPA IFAP

Climate Change: Farmers' Solutions

Proposals for including agriculture in a Copenhagen agreement

Agriculture everywhere is significantly impacted by climate change. At the same time, agriculture stands as a central player in contributing to solutions to climate change and other world challenges. In order that this potential can be realized, **agriculture must be included in any Copenhagen agreement on climate change.**

Agriculture is very vulnerable to climate changes. Yet, most of the world's population is engaged in the agricultural sector, and this sector provides the essential services needed for life, including: food, feed, fiber, energy and ecosystem services. Farmers, especially women farmers, interact daily with the environment; they are thus well placed to implement sustainable agricultural practices that help adapt to and mitigate climate change while benefiting rural and urban populations.

Climate change should be integrated into the broader development context, taking into account hunger, environment, finance etc. Actions to adapt to climate change through an integrated approach to land and water management are urgently needed to secure sustainable development.

The Specificity of the Agricultural Sector has to be Recognized

- Agriculture is different by nature and must be differentiated from other sectors Most of agriculture's green house gas (GHG) emissions are directly linked to natural biological cycles. The future accounting framework should allow a distinction to be made between anthropogenic and non-anthropogenic emissions. Farmers cannot be held accountable for natural biological processes.
- The origin, monitoring and reporting of emissions from agricultural land is inherently different from those associated with fossil fuels. Agriculture should not be penalized for natural emissions that are beyond human control, independent from management effects. Natural emissions are due to climate conditions such as variable rainfall, drought and bush fires.

Agriculture cannot compete with other sectors in terms of cost-efficiency in reducing GHG emissions, unless there is inclusion of the carbon sequestration and displacement potential - using soil and land use change as a carbon sink[1] - along with energy efficiency improvements and supply of renewable energies embedded within the agricultural sector.

1 According to some research studies, agriculture can potentially achieve a significant reduction in the risk of climate change by taking CO_2 out of the atmosphere and storing it in the soil. Rosenberg, N.J. & Izaurralde, R.C. (2001), 'Storing Carbon in Agricultural Soils: A multi-Purpose Environmental Strategy, Dordrecth, Kluwer Academic Publishers, pp 1-10.

1. Agriculture has the potential to mitigate

The mitigation potential of agriculture is estimated to reach 5.5-6 Gt of CO2eq. per year by 2030[1]. This potential is enormous relative to agriculture's emissions which represent 13.5%[2] of global anthropogenic greenhouse gas emissions (GHG). 89% of this potential can be accounted for by soil carbon sequestration; 70% of the total mitigation potential can be realized in developing countries.

Many studies acknowledge that GHG sequestration by agriculture is a quick and cost-effective means to mitigate emissions, e.g. document FCCC/TP/2008/8[3] and work by the IPCC[4]. Significant benefits associated with soil organic carbon storage make sustainable land management a solution to the inter-related issues of poverty, resilience and sustainable development.

To optimize the mitigation potential in agriculture, it is crucial to take into account the following:

- The biggest mitigation potential of agriculture should be expected in terms of improvements in efficiency of agricultural productivity rather than in absolute reductions in GHG emissions.
- Rewarding farmers for carbon sequestration will enhance the carbon storage potential of the agricultural sector. Implementing sustainable farming systems that sequester net carbon do not require advanced technology. However, economic incentives are needed to enable farmers to implement more sustainable agricultural practices.
- There is a need to establish voluntary carbon credit systems to reward farmers for their contribution to climate mitigation through carbon sequestering activities and other agriculture emission reductions.
- The development of a global evaluation system of GHG emissions from agriculture would provide a comprehensive and integrated coverage of all agricultural emissions, and a methodology to handle these emissions.
- Securing GHG-savings and energy supply through sustainable[5] bioenergy[6] and other embedded renewable energy technologies should be included in the accounting rules.
- Ensuring good governance through strong and transparent public institutions is essential to reach effective greenhouse gas reductions. These institutions would also facilitate capacity building, technology transfer etc.

Mitigation is closely linked to adaptation. IFAP therefore believes that the best solutions are those that combine mitigation and adaptation efforts.

2. Agriculture needs support to adapt to the effects of climate change

Even in the case of a stabilization of GHG emissions, climate change will continue to impact agriculture. This translates into increased water scarcity and animal diseases, worsened vulnerability of ecosystems already affected by deforestation and worsened erosion especially in coastal areas.

All parties taking part in the UNFCCC process should be actively involved in developing and enhancing strategies to support farmers in their daily adaptation to climatic variations:

- **Shift from crisis management to risk management.** National risk management response strategies are needed to **reduce risks** and their consequences (i.e. early warning systems, awareness raising campaigns etc.). To

1 'Enabling Agriculture to Contribute to Climate Change Mitigation', FAO submission to the UNFCCC, January 2009.
2 According to the fourth report of the Inter Governmental Panel on Climate Change (IPCC)
3 http://unfccc.int/resource/docs/2008/tp/08.pdf
4 IPCC 2007 Climate Change 2007: The Physical Science Basis. Contribution.
5 In order to ensure the sustainability of these renewable energies including biofuels, there is a need for the emergence of sustainability criteria which would be based on simple principles and harmonized at the global level.
6 Bioenergy includes all wood energy and all agro-energy resources, and wood energy resources are fuel wood, charcoal, forestry residues, black liquor and any other energy derived from trees. Agro-energy resources are crops specifically grown for energy, such as sugarcane, cassava, sugar beet, sweet sorghum, maize, palm oil, rapeseed and other oilseeds, and various grasses. Other agro-energy resources are agricultural and livestock by-products such as straw, leaves, stalks, husks, shells, manure, droppings and other food and agricultural processing and slaughter by-products. (Source: FAO)

cope with risks, crop insurance guarantee fund schemes are needed. To provide **support after crisis**, rehabilitation and recovery schemes are required. Farmers' Organizations should be supported to deliver tools and extension services.

- **Ensure adaptation at farm level for food and energy security** as climate change has severe effects on the hydrological cycle, in particular on water availability. There is a need to think out of the water box and use an integrated approach. This approach would take into account water management for food, energy and other relevant sectors, combined with the establishment of appropriate risk management tools.
- **Link up scientific findings with policy decisions** and development to ensure an integrated approach to climate change policies.
- **Enhance generation and dissemination of farm-specific climate change information** at national, regional and local level following an integrated and multidisciplinary approach (ecosystems, health, water resources and coastal zones).
- **Increase economic profitability and development to enhance the adaptation capacity of farmers.** Increasing resilience of vulnerable populations, such as small scale farmers, including women and young farmers, is vital, as their economic and technological capacity to adapt is very limited.

3. An ambitious financing framework is required

There is a need for a step change in the finance mechanisms so as to reward farmers' positive contributions to climate change mitigation and adaptation.

Two types of financing mechanisms should be distinguished:

1. **Financing mechanisms to provide positive incentives for the implementation of climate-friendly agricultural practices and technologies.**

These include:

- Rewarding farmers for using sustainable agricultural practices that reduce the impact of agriculture on the climate
- Rewarding farmers for providing ecosystem services.
- Putting in place a specific finance delivery mechanism for farmers in developing countries, where there is the biggest potential in agricultural mitigation. There should be direct access to funding for (small holder) farmers.
- Creating a fair international carbon market that gives farmers voluntary access to fair prices for CO2 emissions mitigated by agriculture and through CDM projects and other mechanisms.
- Establishing innovative financial mechanisms for the transfer of technologies to benefit farmers in developing countries in particular.
- Putting in place a program to develop technological solutions for adaptation under the umbrella of the United Nations.

2. **Funding mechanisms for vulnerable farmers to help them adapt to climate change**

- Supporting and enabling Farmers' Organizations to operate as aggregating agencies to cluster individual farmers for access to financial mechanisms, funding and carbon markets.
- Mainstreaming climate change related efforts into development projects.

4. Make technology cheaper, more efficient and accessible to farmers

Climate change makes it even more important for farmers to increase agricultural productivity in a sustainable way on a more restrained natural resource base. In order to reach this goal, improved technologies along with appropriate education and extension services for farmers are needed. Appropriate incentives are needed to support the implementation of existing climate-friendly technology. This is critical to make existing and future

technologies cheaper, more efficient and ready to use by all farmers and would give agriculture a great leap forward. Specific actions to be undertaken include:

- International technology transfer programs and capacity building programs
- Partnerships between farmers and scientists to ensure adequate and fit-for-use technology development where it is most needed.
- More pro-poor farming research to develop adaptation solutions through increased resilience of the agricultural sector. Such research should be based on sound science, technology and governance.
- Recognize and support the development of synergies between resilience and mitigation through including better farm management practices in research programs.
- Enhancement of scientific information on emissions from Methane (CH_4) and Nitrous oxide (N_2O) through increased research on savings in those GHGs to be included in future monitoring and accounting rules under a Copenhagen agreement.

Agriculture has the potential to provide significant climate change solutions. Therefore, the role of agriculture in combating climate change is of utmost importance and must be recognized as such within a Copenhagen agreement.

Desired outcomes from the negotiations

- Official recognition of agriculture as a sector that is adversely affected by the effects of climate change and, at the same time, as a sector with a huge potential to provide solutions to climate change mitigation and adaptation.
- A commitment for a substantial increase in investments in and support for agriculture. The sector must be prioritized in international and national strategies as well as in budgets in order to increase agriculture's resilience to climate change while boosting economic growth.
- Support for the full integration of agriculture in the Copenhagen agreement, including consideration of a possible Agricultural Sector Agreement. Agriculture being a cross-cutting issue, it should be mainstreamed under all the different components of the Bali Action Plan and beyond.
- Recognition of the specific characteristics and needs of agriculture in the Copenhagen agreement in order to take full advantage of the mitigation and adaptation potential of the agricultural sector. The current Kyoto accounting rules do not fully reflect these specificities.
- Establishment of appropriate financial mechanisms to reward farmers for the carbon sequestration, ecosystem services and permanent reductions that mitigate climate change, providing them with the right financial incentives to adopt the most sustainable practices and to supply low-carbon services (energy and materials) alongside food and fodder products.
- Recognition of Farmers' Organizations as partners, as the link between farming communities and the international carbon market, and as the link to the international institutions.

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