

## Farmers' Solutions to Climate Change

*A submission by the International Federation of Agricultural Producers to the Chair of the AWG-LCA with respect to the fulfilment of the Bali Action Plan and taking into consideration document FCCC/TP/2008/8 "Challenges and opportunities for mitigation in the agricultural sector".*

In this submission, IFAP wishes to highlight the importance of recognising the contributions of agriculture in providing effective mitigation and adaptation climate change strategies. IFAP urges the Parties to the Convention to establish an international sector agreement on agriculture which will take into account the specific characteristics and needs of the agricultural sector.

### **Parties are invited to consider the following recommendations from IFAP farmers:**

#### **Combating climate change and creating win-win opportunities in agriculture**

Agriculture is called upon to double its production capacity over the next 25 years in order to provide the world's growing population with food, feed, fibre and fuel, while using the same natural resource base. Giving high priority to increased investments in agriculture through increased production, productivity and quality, is an effective way to mitigate and adapt to climate change, achieve the Millennium development Goals and boost economic growth. Opportunities for mitigation and adaptation by the agricultural sector should complement the potential for productivity and sustainability gains, ensuring future food security, decent farmers' incomes and reducing poverty.

The establishment of **an international sector agreement on agriculture** within the framework of the UNFCCC is a prerequisite to maximize the benefits from the potential of agriculture to combat climate change at the global level. This international sector agreement on agriculture should take into account the **specific characteristics and needs** of the sector.

#### **THE POTENTIAL OF AGRICULTURE ON MITIGATION**

The current accounting framework under the Kyoto protocol takes into account most land based GHG emissions and sinks. However, this framework contains some limitations. Therefore, a different policy approach is needed to tackle the specific case of agriculture.

#### **An international sectoral agreement should consider:**

- **Decoupling anthropogenic and non anthropogenic emissions** - accounting rules in relation to soil carbon sequestration should reflect this distinction in order not to restrict farmers in their capacity to effectively engage in the mitigation debate by penalizing them for GHG emissions from natural biological processes such as droughts, bushfires and variable rainfall.
- **Lower cost bearing potential** - 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 - along with energy efficiency improvements and supply of renewable energies embedded within the agricultural sector.

- **Verification of compliance with approved sequestration practices** – is key to proving to the public and government agencies that agricultural offsets are real. In soils, once the science has quantified the GHG mitigation of a particular agricultural practice in a particular geographical area, there is a need to verify that the farmer is performing the practice properly. The science and practice of land use carbon management has progressed in recent years i.e accurate satellite mapping systems provide a basis for accurate enrollment of acreage and verification of the practice on that acreage. Therefore, perceived potential barriers can now be overcome, resulting in high quality emissions reductions from sustainable land management practices.
- **Incentives and rewards for farmers through established carbon credit systems** – the loss of carbon from agricultural land should be turned into an opportunity for carbon storage. The global additional storage potential in agricultural soils is estimated at 80 billion tons, equivalent of 10% of the total atmospheric carbon. Farmers should be rewarded for the adoption of sustainable agricultural practices that reduce the global carbon foot-print, therefore contributing to climate mitigation through conservation agriculture practices such as zero or reduced tillage, sustainable water management, agro-forestry, and carbon sequestration through sustainable forest management.
- **Focus mainly on net CO<sub>2</sub> emissions** reductions thanks to greater scientific certainty and higher quality of available data on CO<sub>2</sub> - Mitigation opportunities also exist to reduce emissions of Methane (CH<sub>4</sub>) and Nitrous oxide (N<sub>2</sub>O). If properly incentivized, GHG emissions reduction components may be synthesized to create farm-wide sustainable management plans, in which carbon sequestration is embedded with other reductions measures. This would reduce the risk of loss of newly stored carbon due to changes in management.
- The conclusions as shown in FCCC/TP/2008/8 and by the IPCC<sup>1</sup>, acknowledging **the GHG sequestration by agriculture as a quick and cost effective means to mitigate emissions**, are of utmost importance to balance the perception of agriculture in the current climate strategies. According to the IPCC (2007), agriculture has a technical mitigation potential<sup>2</sup> of 1.5-1.64Gt C (5.5-6 Gt CO<sub>2</sub>e) per year by 2030. To achieve this, Sustainable Land Management practices are already available and methods to measure and monitor well developed. Significant co-benefits associated with soil organic carbon storage make sustainable land management an integrated solution to the inter-related issues of poverty, resilience and sustainable development.

## **THE NEED FOR AGRICULTURE TO ADAPT TO THE EFFECTS OF CLIMATE CHANGE**

Even in the case of stabilisation of GHG emissions, the process of climate change will carry on for many decades. Therefore, the need for adaptation is undeniable. The main determinant of agricultural production, thus for food security and economic growth for future generations, is still the seasonal weather variations. The changing frequency and intensity of meteorological events due to climate change increase stress both on crops and livestock. All stakeholders, farmers' organisations included, should be involved in developing and enhancing adaptation strategies.

An international sectoral agreement should be based on:

- **A participatory and inclusive process** to develop policies on adaptation strategies for farmers, linked with scientific findings
- A shift **from crisis management towards risk management** response strategies, based on: minimizing risks, including policies to reduce risks and mitigate their consequences such as early warning systems, farm-specific climate information, ecosystem services, and awareness raising campaigns; coping with risks through crop insurance guarantee fund schemes and support after crisis type of measures to help farmers recover from losses and stabilize their incomes in a situation of increasing climate vulnerability.

<sup>1</sup> IPCC 2007 Climate Change 2007 : The Physical Science Basis. Contribution...

<sup>2</sup> Excluding fossil fuel offsets from biomass.

- Strategies to **increase resilience of vulnerable populations**, especially in developing countries and for small scale farmers, by stimulating economic profitability and growth.

## **FINANCING SUSTAINABLE DEVELOPMENT IN AGRICULTURE**

Current financial and technological transfer plans under the UNFCCC Convention are not well suited to fulfil all the agricultural adaptation and mitigation needs linked to climate change in many developing countries. The backbone of satisfactory response capacity is without any doubt strongly connected to the level of economic development of each country.

In the framework of an international agreement, the agricultural sector should benefit from:

- A specific finance delivery mechanism for farmers in developing countries. Especially small holders need a direct access to financial instruments in order to finance adaptation. The agricultural sector, despite its huge mitigation potential and vital need for adaptation, has for too long been sidelined in CDM projects.
- A fair international carbon market rewarding farmers for carbon sequestering activities or export of renewable energy services. Besides the environmental benefits that accrue to society from the GHG mitigation practices, such as cleaner water, reduced erosion, and better crop and grassland productivity, emphasis need to be put on the substantial economic benefits that rural economies may realize from the multiplier effect of market payments to farmers for utilizing approved GHG mitigation practices.
- Existing funds from other Multilateral Environmental Agreements. Climate change mitigation and adaptation should be mainstreamed into projects aimed at combating related environmental concerns.

## **TECHNOLOGY TRANSFER AS A PRECONDITION TO MAXIMIZE THE POTENTIAL IN AGRICULTURE**

Concrete and affordable tools for farmers and appropriate incentives to support the implementation of existing climate friendly technology are needed to maximize the potential that the agricultural sector offers in mitigation and adaptation. On the other hand, satellite imagery that can verify soil carbon data is well advanced in the experimental stage. Funding the development of accurate scientific data on soil sequestration rates in developing countries that lack this type of data is critical, should developing countries be involved in worldwide mitigation efforts.

An international sectoral agreement for agriculture should address the following issues regarding technology:

- Priority should be given to **international technology transfer** and capacity building programs. Incentives to invest in research and implementation are essential.
- **Pro-poor farming research** is needed to develop solutions and region specific activities based on science, technology and governance.