

FINANCING CLIMATE CHANGE ADAPTATION AND MITIGATION IN THE AGRICULTURE AND FORESTRY SECTORS

Submission by the Food and Agriculture Organization (FAO) and the International Fund
for Agricultural Development (IFAD)

We urge governments to assign appropriate priority to the agriculture, forestry and fisheries sectors, in order to create opportunities to enable the world's smallholder farmers and fishers, including indigenous people, in particular in vulnerable areas, to participate in, and benefit from financial mechanisms and investment flows to support climate change adaptation, mitigation and technology development, transfer and dissemination. We support the establishment of agriculture systems and sustainable forest management practices that positively contribute to the mitigation of climate change and ecological balance.

Paragraph 7b of the Declaration adopted by the *High-Level Conference on World Food Security: the Challenges of Climate Change and Bioenergy*, held in Rome on 3-5 June 2008.

Introduction

This submission is made with a view to making available, to Parties, work undertaken in other intergovernmental processes. FAO and IFAD would like to draw attention to the Declaration adopted by the High-Level Conference on World Food Security: the Challenges of Climate Change and Bioenergy (HLC), particularly its paragraph 7b, reproduced above.

Also covered in this submission are related issues concerning financing of climate change adaptation and mitigation in the agriculture and forestry sectors that were highlighted in the context of the High-Level Conference, attended by a large number of Heads of State and Government. These issues are largely drawn from the HLC background document *Financial Mechanisms for Adaptation to and Mitigation of Climate Change in the Food and Agriculture sectors* (<ftp://ftp.fao.org/docrep/fao/meeting/013/k2396e.pdf>^{hyperlink}), jointly prepared by FAO and IFAD. At the heart of these issues is the message that **agriculture and forestry – the land use sectors – have significant potential for climate change mitigation, but to realize this potential, financing/incentive mechanisms need to target better these sectors and reach small-scale land users.**

As REDD is already being discussed in AWG-LCA, a technical paper on mitigation in the agriculture sector is being prepared by the UNFCCC Secretariat for the AWG-LCA in

Poznan, and a workshop on the same is scheduled for the following AWG-LCA in Bonn in 2009, these issues are both timely and relevant to discussion being undertaken in the AWG-LCA.

Issues

Source, sink and important co-benefits

According to the IPPC AR4, roughly 14% of global greenhouse gas (GHG) emissions are from agriculture sector and 17% are from forestry, including land use change through deforestation. Together they are roughly one-third of all global GHG emissions. The potential for additional carbon sequestration from land use sectors - linked to REDD, sustainable forest management, afforestation and reforestation, agro-forestry techniques, soil conservation in agriculture and renewable energy from biomass—is substantial, corresponding to 5-10 billion tonnes of CO₂e per year by 2030 (IPCC, AR4, WGIII). As agriculture accounts for 50 percent and 60 percent of global emissions from other GHGs, namely methane and nitrous oxide, it also offers ample opportunities for their reduction. At the same time, agriculture and forestry sectors are perhaps the most climate-sensitive of all sectors and hence potentially the most vulnerable. Predicted climate change hot spots appear to coincide with areas where food insecurity will be a major problem.

There is thus large potential in these land-based sectors for generating emission reductions for which financing/incentive/payment mechanisms will be needed. Financial flows to these sectors in developing countries, estimated to be as high as US\$20-100 billion in 2030, would be of great relevance, not only to climate change mitigation but also to meeting the expected costs of adaptation and to the generation of such co-benefits as food security, livelihoods/income for the rural poor, provision of environmental services and substantial contributions to the economies of LDCs.

Actions aimed at safeguarding food security and rural livelihoods under climate change in the coming decades, a key focus for FAO and IFAD, must necessarily focus on synergies between adaptation and mitigation strategies for the rural poor—in order to address climate, environmental, social and economic concerns expressed within both the UNFCCC and the MDGs. Farmers and forest-dwellers must be seen as economic players in light of the valuable services they can provide to counter climate change. Nationally appropriate mitigation measures in the agriculture and forestry sectors in developing countries offer the opportunity to address mitigation from within the dominant economic sectors of most poor developing countries, with possibilities for strengthening their sustainable development.

Accessibility to financing mechanisms: more flexibility in scope, size and procedures

A review of the different existing financing mechanisms showed that there are opportunities for enhancing the ability of financing mechanisms to reach poor countries and communities in developing countries, by broadening their scope to be more inclusive of agriculture and forestry sectors, simplifying their procedures and making them more flexible. Many agricultural and forestry activities are currently eligible under a number of

voluntary schemes and pilot funds, but apart from afforestation and reforestation, they were excluded under the CDM, the largest of the existing carbon markets. 2007 data from the UNFCCC showed that only one out of some 1,100 CDM-registered projects addressed afforestation and reforestation.

Eligible Chicago Climate Exchange (CCX) carbon offset activities with relevance to agriculture and rural livelihoods in developing countries are carbon sequestration in soils (low/no tillage and pasture conservation) and methane capture and flaring - from animal waste management systems - for renewable energy. Allowed CCX forest carbon offset categories, of relevance to rural livelihoods in developing countries, include afforestation and Sustainable Forest Management. If the CCX continues to increase in size and adopt, as expected, new emission reduction goals after 2010, its potential for mitigation activities in the agriculture and forestry sectors could be substantial. Projects in developing countries are expected to play a more important role in future, thereby opening the door to a range of agriculture and forestry activities of relevance to the rural poor. In addition, because CDM CERs can be traded within the CCX, an expansion of this market may increase demand for CDM projects supplying offsets from land-based sectors.

In the voluntary over-the counter market, carbon offset forestry projects have generated to date a large share of VERs (Verified or Voluntary Emissions Reductions credits, corresponding to one tonne of CO₂e) accounting for about 36 per cent of the market. These projects include reduced deforestation, afforestation/reforestation with mixed native tree species, and carbon sequestration activities in forests. VERs originating from methane recovery at livestock farms are few, approximately 1.1 percent of the total.

Compared to the UNFCCC regulatory markets, VERs markets have a higher proportion of forestry based credits out of total market transactions than the CDM (36 percent as compared to 1 percent for CDM), and a slightly higher proportion of credits sourced from Africa (6 percent as compared to 3 percent for CDM). They are already providing carbon finance for reduced deforestation projects. The voluntary markets are also more open than the CDM to smaller offset projects. This feature currently provides greater opportunities for voluntary markets to contribute to sustainable development in small rural communities, compared to CDM.

The large share of small-scale projects generating VERs is also probably related to the possibility of making up-front payments to project owners, helping them to cover start-up costs. This reduces the development burden on small producers, but also results in payments being made for reductions that have not yet occurred. By contrast, CDM buyers typically purchase credits only after CERs have been generated and verified. Small projects in a VERs market are also encouraged by the ability to use simpler methodologies and flexible mechanisms for monitoring and verification. At the same time, this may also limit scaling up such markets, compared to the CDM, since the absence of stringent oversight mechanisms may negatively affect the quality of the VERs produced. In order to reduce such concerns, several independent voluntary standards have been established in recent years, aiming at enhancing the credibility of offset projects.

It may be beneficial for financing mechanisms under a post-2012 regime to draw on the experiences of voluntary markets with a view to increasing incentive schemes for mitigation in the land-use sectors, which are inclusive of small-scale land users and for which better methodologies and more user-friendly tools are available.

Linking adaptation and mitigation: premium carbon credits

Adaptation activities leading to increased agricultural and forestry system resilience, as well as improved natural resources management and productive practices, may be attractive to carbon markets because of their associated mitigation value. No regrets, win-win strategies include: forest management, agro-forestry, agricultural “good practices” (including conservation and organic agriculture) that conserve or restore soil and water resources, and properly scaled bioenergy projects for rural communities, with potential co-benefits in terms of food security, rural incomes and environmental services.

A possibility for enhancing the role of several of these land-based project activities, relevant to the rural poor, is the development of “Premium credits,” i.e. carbon credits generated in projects that not only sequester carbon, but also enhance adaptation capacity through improved ecosystem resilience. On top of likely demand from voluntary markets and carbon funds, a regulated market could be created under post-2012 arrangements, by requiring compliance buyers to include a fixed percentage of such credits in their portfolios. The resulting higher prices for premium credits, compared to standard offsets, may significantly increase direct financial flows to project participants in rural communities.

Barriers and bundling

FAO and IFAD have found that land-based climate change mitigation project activities in rural areas face several barriers to entering the carbon market, including: high start-up and transaction costs; expensive entry fees; insufficient knowledge about project registration cycles; small project scale and fragmentation. Overcoming these constraints will require capacity building, technical support, innovative policy and institutional solutions at both the national and international levels, as well as simplification of procedures as mentioned above. The costs of overcoming these constraints must be taken into consideration when designing incentives for land-based mitigation.

In order to overcome limits on the size of projects and provide “economies of scale”, the individual emission reductions of many small project activities can be bundled together, so that they become cost-effective and thus attractive to carbon and compliance buyers. The CDM Programme of Activities (PoA) also provides the means for linking projects. A PoA is made up of CDM Programme Activities (CPAs). Multiple CPAs can be included at the time of registration and additional CPAs added at any time during the life of the PoA.

Integrated approaches to natural resource management in the context of climate change, including medium-to-large-scale ecosystems, may also provide opportunities for linking projects.

Synergistic linking of development funds with new and additional resources for climate change.

The estimated costs of climate change adaptation and mitigation in the agriculture and forestry sectors far exceed public and private resources currently available. Financial leveraging to generate the US\$20-100 billion a year in 2030 through large-scale land-based mitigation will require mobilization of both public and private resources, including linkages with existing investment and financial flows to rural development. These flows - comprising international debt, FDI, and ODA - are small compared with the expected costs of adaptation and mitigation in agriculture and forestry sectors. Yet, if utilized together with new and additional resources for climate change, positive synergies could be obtained.

Conclusion

Within the framework of international climate policy and its associated mechanisms, under the United Nations Framework Convention on Climate Change (UNFCCC), a key challenge is how to enable agriculture and forestry to contribute to climate change mitigation in line with its potential, while taking fully into account the other economic, social and environmental goods and services they provide.

Central to this challenge is how millions of small-scale land users in these sectors, which constitute 75% of the poor in developing countries, could adopt practices that sequester greenhouse gases effectively. This in turn depends on how they could, appropriately and to a greater extent than is presently the case, participate in and benefit from incentive/financing mechanisms, including the growing carbon market, in order to mobilize the financial resources, technology and capacity necessary for adoption of nationally appropriate mitigation actions and reduction of their vulnerability in the coming decades.

Crucial to meeting this challenge is the development of (i) national needs assessment against which required support can be verified, reported and measured; (ii) technical methodologies for setting baselines, against which verification, reporting and measurement of emission reductions can take place; (iii) incentive/payment schemes; (iv) ways of capturing potential co-benefits and challenges such as permanence and leakage in the agriculture and forestry sectors. It will be important to build on existing technical sectoral knowledge, technologies and experience in developing easy-to-use but robust methodological approaches.

In deciding upon the design and functioning of financing/incentive mechanisms within a post-2012 regime, consideration of the issues covered in this FAO/IFAD submission could be taken into account.