

IISD Food Security and Climate Change Initiative

Agriculture in an International Climate Change Agreement

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Preface

A critical challenge facing the world is how to feed an expected population of around 9 billion by 2050, while simultaneously reducing greenhouse gas (GHG) emissions and adapting to climate change.

The agricultural sector plays a critical role in food security, poverty reduction and economic growth—especially in developing countries, where agriculture is fundamental to sustainable development. Agricultural systems are very sensitive to changes in climatic conditions and will have to adapt if they are to ensure provision of adequate food for an increasing population. The sector is a large emitter of GHGs, responsible for around 14 per cent of global emissions, and has significant potential to sequester atmospheric carbon dioxide and reduce GHG emissions. In this respect, actions in the agricultural sector within the international climate change regime potentially can strengthen adaptive capacity and reduce GHG emissions while improving food security and enhancing rural livelihoods.

With the support of Canada's International Development Research Centre, the International Institute for Sustainable Development (IISD) launched the Food Security and Climate Change Initiative to help promote the triple dividend within the context of the United Nations Framework Convention on Climate Change (UNFCCC). IISD's research, policy and practice aims to inform the inclusion of agriculture in a future international climate change agreement in a way that encourages the triple dividend.

The series of policy reports focus on the following themes:

Agriculture and the UNFCCC Negotiations

- *Agriculture in an International Climate Change Agreement*
- *Agriculture and Climate Change: Post-Durban Issues for Negotiators*

Achieving the Triple Dividend: Perspectives on linking adaptation and mitigation in practice

- *Encouraging a Triple Dividend: Increased Food Security, Improved Adaptive Capacity and Reduced Emissions*
- *Integrating Mitigation and Adaptation in the Agricultural Sector*

Critical Issues for Agriculture Moving Forward

- *Addressing Financing for Agriculture: Ensuring a Triple Dividend for Smallholders*
- *Agriculture and Trade*

The papers are written by a team of researchers from IISD's Climate Change and Energy team. We extend thanks to our Expert Advisory Group—comprised of Mohammed Asaduzzaman, Marcelo Theoto Rocha, Brian Mantlana, Isabel Proulx, Alexandra Conliffe and Marie Boehm—whose input and direction improved the papers. The opinions and ideas expressed in these papers are those of the authors alone and do not necessarily reflect the views of those consulted.

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Abbreviations

AWG-LCA	Ad-Hoc Working Group on Long-Term Cooperative Action
CBDR	common but differentiated responsibility
COP	Conference of the Parties
GHG	greenhouse gas
FAO	Food and Agriculture Organization
IISD	International Institute for Sustainable Development
MRV	measurement, reporting and verification
SBSTA	Subsidiary Body on Scientific and Technological Advice
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change

1.0 Introduction

Agriculture's profile in the international climate change negotiations has grown, and there is increasing awareness of the importance of food production systems in adaptation and mitigation efforts. The UNFCCC (Article 2) aims to stabilize GHG concentrations "at a level that would prevent dangerous anthropogenic interference with the climate system." This level should be achieved within a "time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner."

Agriculture occupies a special place in the climate change negotiations for various reasons. The Food and Agriculture Organization (FAO, 2011) reports that agriculture directly accounts for 14 per cent of global GHG emissions each year, and indirectly contributes to emissions through changes in land use, especially deforestation for agricultural expansion, which accounts for an additional 17 per cent of total GHG emissions. At the same time, agriculture is one of the key sectors in which socioeconomic impacts of climate change will be felt, and thus is critically important in the context of adaptation. The sector is an important employer and contributor to GDP; and in developing countries, it is a major provider of livelihoods, including for the poor—an important consideration for the UNFCCC given its commitment to sustainable development (see Article 3.4). Finally, and importantly, the agricultural sector is the cornerstone of food security. The sector will be expected to provide food for almost 50 per cent more people globally by mid-century, most of them in developing countries, even as arable land continues to shrink. In many respects, agriculture is a unique sector in the UNFCCC negotiations because mitigation and adaptation are intertwined, the sector deals with food security—a basic human need—and millions of smallholders are dependent on agriculture for their livelihoods.

Expectations are high that agriculture will be included in the outcomes of the seventeenth Conference of the Parties (COP 17) to be held in Durban, South Africa in December 2011. Many Parties to the UNFCCC agree that it is important to address agriculture in any future climate change regime, but the details of its situation, formulation and even basic objectives are subjects of discussion.

This paper begins with an overview of the history of agriculture in the negotiations. It then discusses the current state of play in the negotiations, highlighting areas of potential agreement and those where significant challenges persist. Looking to COP 17 and beyond, the paper identifies a number of critical issues to be considered by negotiators, policy-makers and practitioners, and suggests ways for moving forward.

2.0 Background

Most Parties agree that it is important to address agriculture in any future climate change regime, but the details of the situation, formulation and even basic objectives of agriculture as a negotiating issue remain contentious. The Bali Action Plan, adopted in 2007, marked the launch under the UNFCCC of the Ad-Hoc Working Group on Long-Term Cooperative Action (AWG-LCA), one of the two negotiating tracks through which discussions around a future climate change regime are taking place. The mandate to discuss agriculture comes from the Bali Action Plan's agenda item 1(b) (iv) "cooperative sectoral approaches and sector-specific actions," referring to Article 4.1(c) of the Convention, which stipulates:

4.1 All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall: . . .

c) promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors. (United Nations [UN], 1992)

The Bali Action Plan mandate was provided in paragraph 1(b) of the Plan, which launched a process to enable “the full, effective and sustained implementation of the Convention” by addressing, among other things:

(b) Enhanced national/international action on mitigation of climate change, including, inter alia, consideration of: . . .

(iv) Cooperative sectoral approaches and sector-specific actions, in order to enhance implementation of Article 4, paragraph 1(c), of the Convention. (UNFCCC, 2007)

At the fifteenth Conference of the Parties (COP 15) held in Copenhagen, Denmark in December 2009, a Draft Decision text was developed, which was carried over to COP 16 held in Cancun, Mexico in December 2010. Because Parties were unable to find common ground, the Cancun Agreements adopted at COP 16 did not include language on agriculture. Annex I provides an overview of the draft text from COP 15 and tracks its evolution through to Cancun.

The issue received renewed impetus during the inter-sessional climate change meetings in Bangkok (April 2011) and Bonn (June 2011), where agriculture was a prominent element in disagreements over the negotiating agenda. At these meetings, some developed countries pushed for agriculture to be included as a stand-alone item or under the agenda of the Subsidiary Body on Scientific and Technological Advice (SBSTA), rather than under the sectoral approaches agenda item. These developed country Parties were interested in disentangling agriculture from the sectoral approaches discussion to allow agriculture to be addressed holistically (approached from both adaptation and mitigation perspectives) and separately from bunker fuels (recognizing that each sector is unique). Many developing countries opposed moving agriculture from 1(b)(iv) and these proposals did not move forward.

While disagreements over the agenda consumed much of the negotiating time, the Parties were able to produce draft negotiating text on agriculture during the Bonn meetings, drawing on draft language developed prior to Cancun. Annex I highlights the key elements of this negotiating text. Parties provided additional options for the agriculture text at the negotiations in Panama City in October 2011. The resulting text, which is a compilation of Parties’ proposals, includes three options (UNFCCC, 2011b):

1. Option 1: The text that was developed in the June 2011 session in Bonn, including all options put forward by Parties;
2. Option 2: A modification of option 1 that excludes aspects dealing with trade, economic development and markets; and
3. Option 3: No text on agriculture.

It is also important to note that agriculture is also discussed under the AWG-LCA negotiations on adaptation. The Bali Action Plan identified adaptation as a key building block required for a strengthened future response to climate change and the Cancun Adaptation Framework, agreed to in 2010, aims to enhance action on adaptation, including through international cooperation. The Framework invites Parties to plan, prioritize and implement adaptation action, including in the areas of, *inter alia*, agriculture and food security. Many developing countries have produced or are producing national adaptation plans and agriculture has been a key sector in plans produced to date by least-developed countries. Agricultural systems are vulnerable to the impacts of climate change and for many developing countries, adaptation is a greater priority than mitigation in the agricultural sector.

3.0 Critical Issues in the Negotiations

The negotiations have allowed for enhanced common understanding of Parties' views on agriculture, and hopes are high that meaningful progress can be achieved on agriculture at COP 17 in December 2011. Yet considerable divisions remain among developed and developing country Parties, concerning, for example, effects on trade and other potential economic impacts.

Areas Where Consensus Could Be Built

Most countries agree that agriculture is an important element of climate change mitigation and adaptation. Many countries have expressed ambition for a positive outcome on agriculture at COP 17, building on areas in the negotiations where consensus could easily be built:

- The special nature of agriculture, and its relationship with food security
- Adaptation is the priority for developing countries
- Mitigation and adaptation are linked in the agricultural sector
- The need to promote technology research, development and transfer within the sector
- Actions should be based on the best available science

The relationship between agriculture and food security means that negotiators may be able to consider GHG emissions in the agricultural sector as unique because the sector delivers food—a basic human need. Mitigation in the agricultural sector may have to be looked at differently than other sectors because food supplies must increase to meet the needs of a growing global population. Many areas will need increased fertilizer and other inputs to meet food security needs, and might experience increased agricultural emissions as they meet the food needs of a growing population. Such areas should not be penalized in an international agriculture and climate change agreement. The emphasis should be on farmers managing GHG emissions as efficiently as possible, recognizing different production systems and different baselines.

Points of Contention

Uncertainty remains over how best to include agriculture in the international climate regime, and contentious issues, discussed below, will need to be addressed to reach agreement.

- **The defining focus of an agriculture agreement (mitigation, adaptation or both).** This focus would impact and ultimately shape a future programme of work. There is some concern that an agreement under sectoral approaches will focus on mitigation, and that a work programme under SBSTA will focus on scientific and technological issues related to mitigation, such as methodologies to measure soil carbon. Addressing significant adaptation challenges, and the linkages between mitigation and adaption, could go beyond the remit of SBSTA. As such, some countries want greater attention paid to how best to address the agricultural sector within the broader UNFCCC institutional framework; and how to ensure that adaptation—a much more pressing concern for many developing countries—receives emphasis in any agreement on agriculture and climate change. Agriculture, which is a unique sector where mitigation and adaptation are intertwined, poses challenges to a framework that has traditionally addressed the two as separate issues.
- **The trade implications of addressing agriculture in a climate change agreement.** Developing countries have proposed text that specifies that an agricultural sectoral approach should not lead to, or sanction, unilateral trade measures to deal with climate change. They are concerned that, at some point, any sectoral approach in agriculture will have to define what constitutes good practice in agriculture from a climate change perspective, and that this standard might be used by an importing nation, outside of the UNFCCC regime (i.e., as a unilateral measure), to restrict agricultural products that do not measure up. These trade concerns are reflected in other areas of the negotiations.
- **Common but differentiated responsibility (CBDR) in sectoral approaches.** While most developed countries are comfortable with the principle of CBDR with respect to agriculture, they have not agreed to extend the principle to the treatment of other sectors referred to in Article 4.1(c)—bunker fuels being one of the most contentious. This was one of the motives for developed countries wanting to move agriculture from the sectoral approaches discussion (i.e., to separate agriculture from bunker fuels). Most developing countries are in favour of a framing paragraph (i.e., covering all sectors) that invokes CBDR as a principle for all sectors. In addition, many developing countries are opposed to removing agriculture from the sectoral approaches agenda item, concerned that doing so would take agriculture outside the Bali Action Plan mandate and leave the remaining Article 4.1(c) sectors in legal negotiating limbo.
- **The role of carbon markets and agricultural offsets.** Some countries are opposed to the use of carbon market-based approaches as a means of generating financing for developing countries. Underlying the financing discussion is the need for measurement, reporting and verification (MRV). Experience has been gained and data developed through UNFCCC processes, yet many countries lack sufficient information to establish rigorous baselines and assessments. Linked to this issue is the need to ensure benefits accrue to millions of smallholder farmers. Not all countries or farmers will be in a position to benefit from carbon market mechanisms, and grant financing will be important for smallholder farmers who are likely to prioritize adaptation and food security over mitigation.

A broader concern for developing countries is the extent to which the agriculture discussions are attempting to shift the obligations of developed countries toward developing countries. This is reflected in developing country concerns about the perceived reinterpretation of the meaning of CBDR by developed countries in the discussion of sectoral approaches. As well, developing countries question the lack of clarity about the potential beneficiaries of an agriculture agreement—smallholder farmers (the majority of whom are in developing countries and whose work has strong links with livelihoods) or commercial farmers (found in both developed and developing countries).

It is also important to note that reaching an agreement on agriculture is closely linked to other topics under negotiation—such as technology, finance, adaptation and MRV. In the UNFCCC process, trade-offs between different issues are created as a negotiation tactic, and issues such as agriculture are not negotiated as stand-alone items. The linking of agriculture and bunker fuels under sectoral approaches is one example. With sufficient political will, the agriculture section could be extracted and dealt with as a stand-alone item. However, keeping agriculture linked with the divisive bunker fuel issue and focusing attention on the general framework text for sectoral approaches could be seen as tactics to hinder progress—perhaps indicating that not all countries want an agreement on agriculture and climate change.

4.0 Moving Forward at COP 17 and Beyond

An agreement on agriculture under the UNFCCC could encourage the adoption of agricultural processes that have food security, adaptation and mitigation benefits—a triple dividend. Negotiators will need to consider several critical issues as they work toward such an agreement, and move forward from COP 17. IISD's series of policy reports as part of its **Food Security and Climate Change Initiative** delve into many of these issues, including:

- **An agreement on agriculture and climate change has the potential to meet food security, adaptation and mitigation goals.** Ensuring food security for around nine billion people by 2050 will require a significant shift toward agricultural production systems that improve the productivity of farmers in developing and developed countries. An international agreement on climate change could help to influence a positive shift that contributes to improved food security, enhanced resiliency and reduced emissions, as well as enhanced rural livelihoods.

The second paper in IISD's series, *Encouraging a Triple Dividend in Agriculture: Increased Food Security, Improved Adaptive Capacity and Reduced Emissions* examines the triple dividend, and why it is important for an international agreement on agriculture to contribute to food security, adaptation and mitigation goals. The paper examines the trade-offs and synergies between these three goals and critical issues that will need to be considered to shape an effective agricultural agreement.

- **Efforts under the UNFCCC need to stress both mitigation and adaptation in all countries, developed and developing.** The distinction generally made between mitigation and adaptation under the UNFCCC framework becomes blurred in the case of agriculture; the sector offers opportunities to deal with mitigation and adaptation in an integrated manner.

The third paper in IISD's series, *Integrating Mitigation and Adaptation in the Agricultural Sector*, explores the synergies between mitigation and adaptation in agricultural production systems, attempting to demonstrate that the agricultural sector offers an opportunity to further mitigation and adaptation objectives through a more holistic, integrated response to climate change.

- **Smallholder farmers in least-developed and poorer developing countries could require special consideration and support under a climate change and agriculture agreement to enhance climate resilience and mitigation in their production systems.** Developed countries could demonstrate the seriousness of their support for such an agreement under the UNFCCC by providing targeted funding for agriculture and climate change programs in these countries.

The fourth paper in IISD's series, *Addressing Financing for Agriculture: Ensuring a Triple Dividend for Smallholders*, addresses some of the key issues around financing for agriculture within the context of climate change—with a particular focus on ensuring the needs of smallholders are met. The paper examines the current state of play with respect to international financing related to agriculture and climate change, and suggests policy approaches to mobilize investment that supports a triple dividend in agricultural activities.

- **Shifts in agricultural production output, which will be influenced by future climate change, mean that global trade can play an important role in food security.** The trade implications of an agriculture and climate change agreement need clarification, and trade-related issues remain among the most significant concerns in the negotiations.

The fifth and final paper in IISD's series, *Agriculture and Trade*, examines the key trade-related issues in the negotiations addressing agriculture as a sectoral approach to mitigation. The paper surveys the state of play, unpacking and analyzing concerns around such critical issues as: the potential for a sectoral approach to lead to trade barriers; the concern that a sectoral approach could lead to an increase in the prices of agricultural products and threaten food security; and opposition to market-based approaches. The conclusion suggests options for overcoming some of these challenges.

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Annex I: Negotiating Text

At the COP 15, held in Copenhagen, Denmark in December 2009, a Draft Decision text was developed that was carried over to the COP 16, held in Cancun, Mexico in December 2010. Key highlights of the Draft Decision text are quoted below (AWG-LCA, 2010, pp. 13-14):

- “Bearing in mind the need to improve the efficiency and productivity of agricultural production systems in a sustainable manner”
- “Recognizing the interests of small and marginal farmers, the rights of indigenous peoples and traditional knowledge and practices, in the context of applicable international obligations and taking into account national laws and national circumstances”
- “Recognizing that cooperative sectoral approaches and sector-specific actions in the agriculture sector should take into account the relationship between agriculture and food security, the link between adaptation and mitigation and the need to safeguard that these approaches and actions do not adversely affect food security”
- “Affirming that actions in the agriculture sector should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade”
- “Decides that cooperative sectoral approaches and sector-specific actions should be consistent with the relevant provisions and principles of the Convention, in particular the principle of common but differentiated responsibilities”
- “Decides that all Parties . . . should promote and cooperate in the research, development, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases, particularly those that improve the efficiency and productivity of agricultural systems in a sustainable manner and those that could support adaptation to the adverse effects of climate change, thereby contributing to safeguarding food security and livelihoods”
- “Requests the Subsidiary Body for Scientific and Technological Advice (SBSTA) to establish a programme of work on agriculture”

At COP 16, Parties were not able to reach agreement on how to include the items discussed under 1(b)(iv) and, as a consequence, agriculture was not included in the Cancun Agreements.

At the April 2011 AWG-LCA meeting in Bangkok, Thailand, proposals were put forward to include agriculture as a separate stand-alone agenda item. Many developing countries opposed that proposal and so it did not move forward, and agriculture remained under 1(b)(iv). During the June 2011 session in Bonn, Germany, some Parties proposed to have agriculture included in the SBSTA agenda. These Parties were interested in disentangling agriculture from the sectoral approaches discussion to allow agriculture to be addressed holistically (approached from both adaptation and mitigation perspectives) and separately from bunker fuels (recognizing that each sector is unique, and in particular that the concept of common but differentiated responsibility does not apply in the context of international bunker fuels). Again, this was not agreed and agriculture continued to be discussed under the cooperative sectoral approaches and sector-specific actions agenda item of the AWG-LCA.

At the conclusion of the June 2011 session in Bonn, Parties were able to produce a compilation of draft text on agriculture building on the Copenhagen text. In this regard, new elements were introduced (or reintroduced, as many of these provisions were from bracketed text developed prior to Copenhagen), and are quoted below (UNFCCC, 2011a):

- “*Bearing in mind* [that the agriculture sector is the main source of food production, employment and income for developing countries. There is [a need] [the need] to improve the efficiency and productivity of agricultural production systems in a sustainable manner.”
- “*Recognizing* that adaptation for developing country Parties is the outmost priority and that market-based mechanisms, particularly offsets, for mitigation in the agriculture sector will not achieve the necessary emission reductions due to, inter alia, non-permanence, additionality and leakage.”
- “[Affirming that cooperative sectoral approaches and sector-specific actions in the agriculture sector should not limit the ability of developing country Parties to pursue economic and social development and poverty eradication, and, to that end, that it is essential that cooperative sectoral approaches and sector-specific actions in the agriculture sector are undertaken in a manner that is supportive of an open international economic system.]”
- “Recalling the principles and provisions of the Convention, in particular Article 3, paragraphs 1, 4 and 5, developed country Parties shall not impose unilaterally any technical regulations, sanitary and phytosanitary measures or market-based mechanisms on any grounds related to climate change, including stabilization of greenhouse gas concentrations, emissions leakage and/or the cost of environment compliance, that will have a negative effect on trade in agriculture from developing country Parties].”
- “[Decides that cooperative sectoral approaches and sector-specific actions in agriculture shall not lead to increases in the prices of agriculture products, and shall not threaten food security in any way].”
- “[Decides that cooperative sectoral approaches and sector-specific actions in the agriculture sector shall be based on the best available science, taking into account fully differences between agricultural systems regarding geographic, economic and social conditions and specific national development priorities and circumstances, in particular of developing country Parties, in accordance with equity and common but differentiated responsibilities and in the light of the fact that economic and social development and poverty eradication are the first and overriding priorities of developing country Parties]”

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