

What is the connection between agriculture and Rio+20?

Agriculture, though not an item on the agenda, is closely linked to most of the sub-topics to be addressed at the United Nations Conference on Sustainable Development.

The Inter-American Institute for Cooperation on Agriculture (IICA) has prepared this technical note to support the Member States that will be participating in the United Nations Conference on Sustainable Development, known as Rio+20. The note, which underscores the essential role of agriculture in sustainable development, will serve as input for informed discussions. Our goal, in brief, is to ensure that the strategic importance of the agriculture sector, and its contribution to sustainable development, receive the attention they deserve in the discussions and conclusions of the Conference.

Rio+20 and agriculture

The United Nations Conference on Sustainable Development (Rio+20), to be held from June 20-22 in Rio de Janeiro, Brazil, will focus on two main themes: the green economy for the eradication of poverty, and the institutional framework for sustainable development. These themes have been divided into seven sub-topics: jobs, energy, cities, food security, disasters, water and oceans.

Agriculture, despite being closely related to the use of natural resources and the economic and social development of countries, is not one of the sub-topics proposed by the Conference.

Nonetheless, most of the sub-topics are directly related to the agriculture sector. Rio+20 provides an opportunity to analyze the current role of the agriculture sector and to ensure that future trends within the sector contribute to sustainable development worldwide.

Agriculture must contribute significantly to the sustainable development of national economies in three important areas:

- A) Sustainable agriculture, natural resources and green economy
- B) Agriculture and climate change
- C) Food security and family agriculture

A) Sustainable agriculture, natural resources and green economy

Sustainable agriculture is an integrated approach that has emerged as a response to growing concern over the degradation of natural resources (air, water, soil, biodiversity) caused by commercial agriculture and the inefficient or improper use of these resources in agricultural production.

A fundamental feature of sustainable agriculture is the adoption of practices that are in harmony with the environment and guarantee the stability and profitability of production in the long term, without deteriorating the natural resource base on which it depends.

The predominant production models in place today depend on the intensive use of chemicals, energy and water, and do not take into consideration the associated environmental and social variables. Sustainable agriculture calls for supporting the development and well-being of rural communities, and the sustainable management of natural resources, to minimize the negative impacts on the environment.

In a society increasingly aware of the need to promote social inclusion and reduce CO₂ emissions generated by the current production system, the green economy is a term being heard more and more in global discussion fora. In contrast with the traditional economy, known as the “brown economy”, because it is based on the use of fossil fuels and the accelerated extraction of natural resources, the green economy is based on the use of renewable energy.

The key actions that must be taken in connection with sustainable agriculture, natural resources and the green economy are:

- Promote public investment in common environmental goods associated with sustainable agriculture, to ensure the conservation and rational use of water, soil, biodiversity and energy for agricultural production activities.
- Strengthen technical capacities in the countries regarding the use of alternative financial mechanisms that identify, quantify, validate and pay for the environmental services generated by sustainable agriculture.

- Provide technical support to the countries in developing agricultural and economic policies that consider the social and environmental benefits associated with sustainable agriculture.

Agriculture and natural resources

Natural resources –air, water, soil, biodiversity– are essential for food production, which means that they can be heavily impacted by agricultural activities.

The unwanted impacts of modern-day commercial agriculture include: soil erosion and degradation, contamination and excessive use of water, deforestation, loss of genetic resources, etc.

Sustainable agriculture

Sustainable agriculture refers to the capacity of agriculture to contribute to overall well-being over time, by providing sufficient food and other products and services in ways that are economically efficient and profitable, socially responsible and environmentally friendly.

Green economy

The green economy is defined as an economy that improves the well-being of human beings and social equity, while significantly reducing environmental risks and ecological damage. In its most basic form, a green economy is one that emits low levels of carbon, uses resources efficiently and is socially inclusive. In a green economy, the increase in incomes and the creation of jobs are the result of public and private investment aimed at reducing carbon emissions and pollution, promoting energy efficiency as well as the rational use of natural resources and the conservation of biological diversity (UNEP, 2011).

B) Agriculture and climate change

The increase in the frequency and intensity of variations in climate is already having an impact on many human activities, and the effects of climate change on the agricultural sector can have serious consequences for all of humanity. However, in global fora and international agreements dealing with climate change, the topic of agriculture per se has only recently been included, as in the case of the COP-17.¹

In the preparatory meetings for Rio+20,² most of the governments of the Americas have expressed interest in the topic of climate change, especially with respect to the management of risks associated with the frequency and intensity of natural phenomena. In particular, the countries of the Caribbean have repeatedly called attention to their vulnerability to extreme weather events and rising sea levels.

Agriculture, as a sector, has not received the same attention despite being an essential element of sustainable development, where the pillars of food security, green economy and climate change converge.

Climate change will make itself felt in many ways in the agricultural sector:

Adapting agriculture to climate change

- Efficient management of agricultural lands and recovery of degraded soils.
- Efficient use of water for irrigation and other agricultural production activities.
- Conservation and use of agricultural biodiversity.
- Promotion of *climate smart agriculture*, taking into consideration agro-ecosystems that are resilient to climate change, silvopastoral and agroforestry systems, integrated pest management, family agriculture, conservation agriculture, organic agriculture and development of agrobiotechnology.
- Development of local, national and regional strategies for adaptation to climate change, including all relevant actors in the value chain of the agricultural sector, as well as early warning systems and agricultural insurance.

Climate Change

*“Climate change” means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.**

* United Nations, 1992. United Nations Framework Convention on Climate Change.

- Strengthening of the national adaptation funds to channel international contributions to the countries.
- Creation of articulation and coordination mechanisms to achieve greater integration and empowerment of the organizations responsible for matters related to climate change in agriculture (e.g., ministries and research, teaching and extension agencies) and to improve the ways in which they coordinate with other relevant organizations (e.g., ministries of the environment, meteorology).
- Strengthening of research, innovation and the management of information and knowledge, to take advantage of existing opportunities.
- Restructuring of public and private funding within the framework of a green economy, to ensure the transition to sustainable and intelligent agriculture adapted to climate change, considering necessary mechanisms and incentives such as an insurance market and other investments.
- Development of capacities for stakeholders in the public sector and in rural territories, increasing technical and institutional capacities for the formulation and implementation of the public policies needed for rural territories and agriculture to adapt to the effects of climate change.
- Creation and/or strengthening of the infrastructure required for adaptation, to ensure the availability of water and to

¹ Seventh Conference of Parties of the Framework Convention on Climate Change, Durban, December 2011.

² Subregional and Regional Meetings: Southern Region, 28-29 March 2011, in Quito, Ecuador; Caribbean Region, 20 June 2011, in Georgetown, Guyana; Central Region, 27-29 June 2011, in Guatemala City, Guatemala; and LAC Region, 7-9 September 2011, in Santiago, Chile.

modernize its use, as well as to improve the post-harvest handling, storage and distribution of agricultural products.

Mitigation of climate change

- Technical and financial support for the formulation and implementation of Nationally Appropriate Mitigation Actions (NAMA) in agriculture.
- Technical and financial support for developing a Measurement, Reporting and Verification (MRV) system for the agricultural sector, and for developing and implementing standards for certification.
- Attaching priority to the agricultural subsectors with the greatest impact on the generation of greenhouse gases (GHG).
- Providing producers and public-sector actors with the knowledge they need to apply methods for lowering GHG emissions from agriculture.

Institutional capacity

- Strengthening of the synergies among the ministries of agriculture, environment, economy and health to address the issues of the agricultural sector.
- Strengthening of intergovernmental cooperation throughout the hemisphere.
- Strengthening of national and regional strategies aimed at adapting to climate change and reducing GHG emissions.
- Strengthening of intersectoral and multilevel territorial management, facilitating articulation of the agendas of the different summits and multilateral actions in which international coordination and/or cooperation bodies are involved.

C) Food security and family agriculture

Food security has become of topic of increasing importance in recent years. The food crisis of 2006-2008 forced decision-makers to address the issue as it pertains to the volatility of and increases in prices, the ability of the most vulnerable segments

to acquire food, alternative local production systems as a means of guaranteeing food supply, etc.

Family agriculture is a key sector in strengthening food security in our region. In Latin America, some 20% of the population lives in rural areas, where some 14 million family agriculture units exist,³ most of which are small- and medium-scale farms. In most of the countries, family agriculture is responsible for producing more than 50% of the food consumed.

For this reason, it is imperative that development in rural territories be done in such a way as to ensure more effective management of natural resources, by promoting efficient practices that will increase the quantity and sustainability of family farms. The strengthening of family agriculture can contribute

Food Security

“Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.”
(FAO, 2011)

Food security depends on the existence of four inter-related “dimensions”: availability, access, use and stability.

Family agriculture

Family agriculture is an agricultural system based on domestic production-consumption units in which family members provide most of the labor and most of what is needed is produced on the family farm or acquired by sale or barter (IICA, 2009).

The participation of women in the agricultural workforce has held steady for the last 30 years at 20% (FAO, 2011), which indicates that rural women in Latin America play a predominant role not only in the administration of the household, watching out for nutrition, health and well-being of the family, but also in the direct production of food.

3 Alcances sobre la agricultura familiar in América Latina (Alexander Schejtman, 2008).

to rural well-being by creating better economic, educational and health opportunities, slowing urban migration, and promoting the sustainable development of rural communities.

The principal actions needed to strengthen food security and family agriculture are as follows:

- Support appropriate innovations, with a view to increasing production through the implementation of efficient practices in the rational use of natural resources.
- Promote the improved use and conservation of agricultural biodiversity *in situ* by farmers, in order to increase the sustainability of rural production systems and their adaptability to variations in climate.
- Strengthen the technological development and diversification of family agriculture, for the purpose of increasing the supply of fresh and healthy food, improving rural nutrition and reducing contamination of the environment by agricultural chemicals.
- Promote the adoption of policies aimed at placing the output of family agriculture on national markets in order to create jobs and increase food security.

What actions need to be taken with regard to agriculture at Rio+20?

The Rio+20 Conference affords an excellent opportunity to focus attention on the fundamental contribution that agriculture makes to sustainable development and to ensure that it is addressed in the discussions and decisions taken at this important forum. The lines of actions spelled out in the Conference Declaration (draft zero) will serve as support for effecting the important changes in practices and policies that will have to be implemented at the national level if the agricultural sector is to contribute more fully to the sustainable

development of countries and mitigate and adapt to the effects of climate change.

In the draft zero of the Declaration, which will serve as the basis for the conclusions and recommendations of Rio+20, it will be important for the delegations to propose texts that call attention to the key role of the agricultural sector, especially in the following topics (and paragraphs) of **Section V: Framework for action and follow-up**:

- **Food security – paragraphs 64-66**
- **Water – paragraphs 67, 69**
- **Energy – paragraphs 70-71**
- **Climate change – paragraphs 88-89**
- **Forests and biodiversity – paragraphs 90-91**
- **Land degradation and desertification – 92-93**

IICA, following on the priorities and directives agreed upon at the Meeting of Ministers of Agriculture of the Americas, held in San Jose, Costa Rica, in October 2011, has prepared this Technical Note, as input for the delegations to Rio+20 on the topic of agriculture and its role in sustainable development.

Agriculture is much more than an indispensable process of food production; it is the main livelihood of at least 20% of the population and is at the heart of the human-environment relationship.

Therefore, the essential role that agriculture plays in the sustainable development of the planet deserves the attention of the national delegations, so that the commitments assumed at Rio+20 can be translated into informed decisions and effective solutions for the great challenges that the countries, the world, and the humanity as a whole are facing.
