



# Briefing Paper

## Taking forward the UNFCCC Koronivia Joint Work on Agriculture

By CUTS International, Geneva

### Summary

Following the ground-breaking decision at COP23 last year to advance work in the area of agriculture in the context of UNFCCC climate talks, Parties and observers now have two years to work on "bold actions" needed in agriculture before more specific ones are agreed upon in 2020. This briefing paper is based on CUTS International's submission, as an observer, to this new "Koronivia Joint Work on Agriculture". After exploring the socioeconomic and food security dimensions of climate change in developing countries' agriculture sector, the paper provides recommendations on taking forward their interests at UNFCCC in the areas of capacity building, leveraging finance, access to technology, knowledge sharing and promotion of collaboration.

## Introduction

Climate change and agriculture are strongly interlinked, causing both positive and negative impacts on a country's development, depending on its dependence on agriculture, its social structure, its poverty level, etc.

From the 17<sup>th</sup> Conference of Parties (COP17) of the United Nations Framework Convention on Climate Change (UNFCCC) in 2016, until the Koronivia Decision on Agriculture<sup>1</sup> at the COP22 in 2017, Parties have been discussing agriculture-related issues, including "Socio-economic and food security dimensions of climate change in the agricultural sector", particularly using the occasion of five workshops under the Subsidiary Body for Scientific and Technological Advice (SBSTA).

It is now time to look at how can UNFCCC better support the effective implementation of the Paris Agreement and the Nationally Determined Contributions (NDCs), taking into account the challenges of the developing countries and LDCs, to allow for greater resilience of the agriculture sector to the impacts of climate change, and contribute to reducing the GHG emissions locally and globally, without affecting the socio-economic development and food security of communities all over the world.

## Socioeconomic and Food Security Dimensions of Climate Change in Agriculture

### State of Play in Developing Countries

While all countries will be affected by climate change, there's a consensus that developing countries are far more vulnerable to ecosystem changes compared to their developed country counterparts. The predominance of agriculture as the foundation for economic development, the limited economic and institutional capacity to respond, their warmer baseline climates, and their heightened exposure to extreme events all together make up for a future with dire consequences due to climate change and associated impacts to developing countries and Least Developed Countries (LDCs).<sup>2</sup>

Currently, 815 million people suffer from chronic hunger in the world. Countries that were already facing food insecurity issues due to commodity devaluation trends have suffered the most from increased violent conflicts over the past 10 years.<sup>3</sup> Droughts, floods and other ecosystem-related changes are likely to worsen the already unfavourable socioeconomic setting (such as population growth, migration patterns, limited access to education and technology as well as security conflicts) of developing countries and LDCs.

According to the 2013 IPCC report, climate change impacts agriculture through a number of pathways, for instance, all the four dimensions of food security (food availability, access, utilization, and stability)

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<sup>1</sup> [http://unfccc.int/files/meetings/bonn\\_nov\\_2017/application/pdf/cp23\\_auv\\_agri.pdf](http://unfccc.int/files/meetings/bonn_nov_2017/application/pdf/cp23_auv_agri.pdf)

<sup>2</sup> Parry M.L., et al. Millions at risk: defining critical climate change

threats and targets. Global Environ. Change. 2001

<sup>3</sup> Food and Agriculture Organization of the United Nations. (2017) The State of Food Security and Nutrition in the World.

are potentially affected through climate change effects on agricultural production and the incomes of rural households<sup>4</sup>. Also, the food prices, food storage and transportation and markets are impacted on by climate change (IPCC WGII AR5 Ch 7). These impacts will be high in areas where low yields go hand in hand with poverty and in areas where households are highly depended on rain-fed agriculture.

As expressed in the United Nations Sustainable Development Goals and the Paris Agreement, many UNFCCC member countries consider food security to be of utmost importance to them. (FCCC/SBSTA/2016/INF.5). Parties also recognized that climate change is a massive threat to such goals and developing country Parties further accentuated the important role of agriculture in their poverty reduction, sustainable development and livelihoods (FCCC/SBSTA/2014/INF.2).

The impacts of climate change to the food security sector calls for adaptation measures to be undertaken, such measures need: (i) not to compromise the country targets on reducing GHG emissions and preserve environment, while, (ii) increasing food security and enable for sustainable socio-economic development of the country. Some practices which aim at increasing food security can also have mitigation benefits, such as: promotion of zero grazing animal husbandry, production of improved livestock feed, enhancement of manure management through the practice of composting, development of short season rice varieties, management of watersheds for the preservation of hydrological cycles, promotion of bio-fertilizers and organic manure<sup>5</sup>, among others.

It seems critical to highlight that nowadays most farmers and agro-processors in developing countries and LDCs do not have access to finance, access to suitable technology, lack knowledge/capacities, lack market instruments, lack climate-resilient production infrastructures/mechanisms, lack knowledge on pest control or water management, and so on. In the past few decades, these have collectively added onto the increasingly negative impact of climate change on their business and products. As a result, they are now calling for: more water/soil conservation; land husbandry; reduction of carbon footprints from their products; know-how on new production technologies; education on irrigation systems; facilitation of rain fed crops and diversification of crops; easy facilitation of their access to finance, fertilizers, drought-resistant crops, farming equipment's etc.; an increase in the development of soil fertility management; and an increase in the use of manure/compost, which are all essential in mitigating and/or adapting to the impacts of climate change on agriculture in the East African Community (EAC). (CUTS International, Geneva, 2016).

## Overview of UNFCCC Discussions

Discussing the issue of agriculture and climate, in light of their socioeconomic and food security dimensions, UNFCCC Parties already affirmed the vital role of sharing experiences, which is a fundamental instrument in achieving climate change adaptation and food security. Furthermore, many developing countries highlighted the importance of policy and strategies' implementation, noting, in particular, the essential

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<sup>4</sup> Challinor, A.J., Watson, J., Lobell, D.B., Howden S.M. Smith.D.R., Chhetri.N, (2014).A meta-analysis of crop yield under climate change and adaptation. *Nature Climate*

*Change* volume 4, pages287–29.

<sup>5</sup> UNFCCC SUBSTA Session 39 (Warsaw 11<sup>th</sup> to 16<sup>th</sup> Nov 2013): Item number 10 issues relating to agriculture.

role of finance [...] (FCCC/SBSTA/2016/INF.5).

Aside from financial support, developing countries also noted that support mechanisms should include: “(1) research, development and transfer of technology; (2) financing and budget tracking; (3) assistance with the implementation of pilot projects and scaling up successful strategies to the national level; and (4) capacity-building with a strong emphasis on monitoring, reporting and verification, climate policy integration, improving human resources, methodologies and metrics”. (FCCC/SBSTA/2016/INF.6:12).

With regard to the work of the SBSTA, it was stated that its key role should be in the development and sharing of good scientific and technical information, which will inform parties on what decisions to take in order to ensure food security and promote synergies between agricultural productivity and climate change adaptation/mitigation (FCCC/SBSTA/2015/INF.6). All parties, therefore, agreed that the SBSTA should be the major body to facilitate in the provision of technological support to Parties. (FCCC/SBSTA/2016/INF.5).

It was also advised to Parties to engage in sustainable farming methods and ensure that ecosystems are protected, and small-scale farmers are supported. Such actions, therefore, encompass the development of pest controls and the use of seed varieties, which are adaptable to environmental changes (FCCC/SBSTA/2015/INF.7).

To summarize, in the different SBSTA workshops on agriculture (on the specific item of “Socio-economic and food security dimensions of climate change in the agricultural sector”), Parties focused

on the issues related to and noted the importance of the adaptation of value chains and on-farm systems that promote social and environmental co-benefits and recommended that any decisions implemented now should allow for more relevant/sustainable decisions to be made in the future regarding socio-economic and food security dimension in the agriculture sector (i.e. becoming more aware of the interlinkages and impacts existing in those domains).

Like other negotiating processes, a major conclusion that has emerged from the UNFCCC negotiations is that countries continue to be diverse and, therefore, tend to have different negotiating interests. In the UNFCCC process, this diversity encompasses different elements such as their economic, social/environmental positions; their financial capability to counter climate change impacts; and a lack of scientific understanding/knowledge on global warming (Alessi and Van Dar Gaast, 2016). As a result, the nature of the climate change negotiation process and any future implementation of its outcomes presents varying degrees of challenges in all of the above areas, in particular when it relates to agriculture, especially for developing countries and LDCs.

## **Taking Forward Developing Countries' Interests at UNFCCC**

To ensure socio-economic development and food security are not continuously hindered by climate change, developing countries and LDCs may want to push for some points/strategies to be considered by the Koronivia Joint Work on Agriculture at the next UNFCCC SBs' sessions.<sup>6</sup>

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<sup>6</sup> OGALLAH, S.S. and RAPANDO, N. (2018). “Agriculture Negotiations at UNFCCC: Priorities for East African Community (EAC) Member States”. Geneva. CUTS International, Geneva.



## Building Capacity

Capacity development remains key to development and implementation of adaptation and mitigation measures in the food security sector, including identification of ways to support capacity building that it may entail. Information sharing, education and training of all relevant stakeholders on adaptation and mitigation in the food security sector is important. Capacity needs assessments of key institutions working in climate change and food security aspects need to be undertaken to enhance their role in development and implementation of climate resilient food systems, practices and technologies. This would also entail increased capacity in the development and promoting the use and dissemination of knowledge products, guidelines, tools and models for climate change adaptation and mitigation in the food Sector.

A proposed key action is the assistance in implementing regular assessments of Climate Change Impacts and Mapping of Vulnerability to Food Insecurity under Climate Change. This would then support the mapping of adaptation practices that strengthen household food security while ensuring improved livelihoods. There is also need to build capacity nationally for continuous monitoring of climate change impacts.

## Leveraging Finance

The UNFCCC should support in the provision of financial resources and support to developing countries and LDCs, which will enable them to, amongst others, address agricultural climate adaptation and promote co-benefits in order to achieve food security/ resilience goals; and establish appropriate mechanisms for research/development/the transfer of technology, implement pilot projects, and build the capacity to monitor, report and verify climate policy integration

(FCCC/SBSTA/2016/INF.6).

Finance remains one of the major gaps to implementation of adaptation and mitigation measures for improved food security. UNFCCC should play a role in identifying possible sources of support and access to those possible sources of funding. There should be financial investments (through Green Climate Fund and other financial means to be supported by developed members) to support the strengthening of alternative agricultural (crop and livestock) value chains, while clearly outlining the roles of private and public-sector players. Investment similarly needs to support infrastructural development that ensures inclusive participation of rural and urban communities. Funding should also promote new advances in technology development and associated knowledge and capacities on major investments in renewable energy, food processing, soil and water conservation and improved agronomic practices among others.

## Facilitating Access To Technology & Technical Assistance

It is important to technically assist developing countries and LDCs, for instance in developing models for improving data, which will be needed for the assessment of climate change impacts on food security (FCCC/SBSTA/2015/2015/INF.7). The capacity of climate forecasts and early warning information systems needs to be strengthened in order to provide suitable inventory that can be used to successfully warn stakeholders of any impending disasters on food security. (FCCC/SBSTA/2015/INF.6).

There already exist diverse technologies that could make food systems to remain resilient to the impacts of climate change, however the identification of appropriate technologies and practices need to be appropriate to the specific conditions and existing

social economic settings. This would mainly include the technologies that have withstood the test of time at the farmers' level and have been implemented longer like conservation agriculture that has been widely used in countries like Zambia.

There is also need to increasingly develop incentives that encourage greater research into development of new innovations for agriculture and food security. UNFCCC can support new / strengthen existing avenues for sharing with a wide range of stakeholders such practices including those developed and focused at the farmer level.

## **Sharing Knowledge**

In view of the differences in agricultural systems, it is important to explore and take advantage of the knowledge of other countries, in building synergies between all processes for the effective implementation of countries' Intended Nationally Determined Contributions (INDCs) in order to address adaptation, mitigation and capacity-building needs. In this situation, the SBSTA can also play an essential role in ensuring that the specificities of the agricultural sector are properly addressed under all convention processes (FCCC/SBSTA/2016/INF.5).

Moreover, a number of research efforts aimed at addressing climate change and food security exist, this includes for instance; efforts by the Consultative Group of International Agriculture Research (CGIAR), FAO and the respective country level national research organisations. Emerging evidence from such research needs to be disseminated for rapid uptake and scale up. However, research adopting a Public Private Partnership (PPP) model would imply an increased support by the private sector. The identification of research priorities need to be relevant to research and technology developments needed at the country level.

There is also need to ensure that current knowledge regarding climate change adaptation and mitigation in the food security sector is adequately utilized for decision making at national, sub-national and farm level. This should be a key objective. This would then call on the need for a compilation, assessment and sharing of knowledge especially regarding agricultural production and productivity, seasonal variability of rainfall, climate adaptation and mitigation technologies as well as land degradation. In addition, indigenous knowledge systems need to be integrated in the knowledge development process. Enhanced research on climate change and food security also calls for accelerated generation of data and evidence to support the required response actions.

## **Promoting Collaboration**

Members need to consider how the existing and emerging institutions in the agriculture sector could support food security systems in the face of a changing climate. The food security sector will need to link with other UNFCCC processes where necessary by drawing lessons on stakeholder arrangements from other related processes such as REDD + (Reducing Emissions from Deforestation and Forest Degradation) and LULUCF (Land Use, Land Use Change and Forestry).

Since some Parties have already jointly implemented their National Adaptation Plans (NAPs) with other countries within a global programme, which is coordinated by the Food & Agriculture Organization (FAO) and the United Nations Development Programme (UNDP), it is expected that the continuation of this practice will assist developing countries and LDCs in identifying their vulnerabilities/risks and help in identifying the technologies/practices that can help in managing their climatic risks and adaptation to climate change

(FCCC/SBSTA/2016/INF.6).

The approach to mitigation should have adaptation and sustainable development benefits as shown through the Climate Smart Agriculture approach for instance, and should not negatively impact on food security. There is therefore an increasing need to establish guidelines to identification of mitigation actions in the food sector, taking cognizance of the national circumstances. Collaboration with knowledgeable institutions and between developed and developing country members could be facilitated by UNFCCC for this purpose.

Koronivia Joint Work on Agriculture provides a concrete opportunity, within the UNFCCC, for developing countries and LDCs to present their concerns and needs related to agriculture and food security. These must be heeded by all Partners by agreeing to bold actions that support developing countries and LDCs in order to enhance their agriculture resilience in facing climate adverse effects and ensuring an agricultural development that is conscious of not only its environmental, but also social and economic impacts.



## CUTS International, Geneva

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