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Special Topic

Agriculture negotiations under the United Nations Framework Convention on Climate Change (UNFCCC)

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Abstract: Agriculture and food in the United Nations Framework Convention on Agriculture (1992) and related legal instruments, including the Paris Agreement (2015). With initial discussions during climate negotiations from 2004 to 2011, issues related to agriculture were discussed from 2012 to 2017 in the Subsidiary Body for Scientific and Technological Advice (SBSTA), which is one of the two permanent subsidiary bodies of the UNFCCC. The first substantive outcome and the decision of the Conference of Parties (COP) was made at the 23rd COP (Decision 4/CP.23) held in Bonn, Germany in November 2017. The decision SBSTA and Subsidiary Body for Implementation (SBI) to jointly address issues related to agriculture. Further, it officially acknowledged the significance of the agriculture sector in adapting to and mitigating climate change through the Koronivia Joint Work on Agriculture (KJWA). The KJWA road map has been developed with the final reporting to be taken place in COP 26 in Glasgow, United Kingdom in 2020. This paper provides the major events that have taken place during the agriculture negotiations to-date under the UNFCCC.

Keywords: Agriculture negotiations, UNFCCC, Paris Agreement, Koronivia Joint Work on Agriculture (KJWA)

Introduction

The Rio Earth Summit of the United Nations held in Brazil in 1992 gave birth to three important global conventions, namely, the Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC), and United Nations Convention to Combat Desertification (UNCCD). These three conventions jointly plays a pivotal role in a scenario that land productivity is declining at an alarming rate, >33% of the land is degraded, current management practices in the land use sector is responsible for approx. 25% of the global greenhouse gas (GHG) emissions, and that biodiversity is disappearing at alarming rates (UN, 2017). The secretariats of the UNFCCC, CBD and UNCCD have thus, established a Joint Liaison Group (JLG) in August 2001 in order to enhance coordination among the three conventions. Since 1990s, almost all countries in the world have been negotiating on international climate policies as Parties to the UNFCCC. This has resulted in several milestones, but has made it clear that countries have different negotiation interests, complicating the process of reaching agreements.

The 25th United Nations Climate Change Conference ended in Spain in December 2019. The outcomes of the conference were not satisfactory with a widespread disappointment that no overall consensus was reached on increased climate ambition (https://news.un.org/en/story/2019/12/1053561). Despite the disappointment voiced at the contents of the outcome document, several

announcements made during the two-week conference to indicate progress.

Agriculture, which is directly linked with all issues addressed in these three global conventions (OECD, 2002), and a changing climate will have its serious implications on ecosystems and biodiversity. Agriculture is one of the most vulnerable sectors to climate change thus, requires substantial adaptation efforts. However, agricultural sector is also responsible for a significant amount of global greenhouse gas emissions (GHGs), highlighting its potential role in climate change mitigation. Therefore, over the years, agriculture have started gaining a prominent position in the international climate change negotiations. This paper provides an overview of the events and progress of international climate change negotiations, only focussing on agriculture under the United Nations Framework Convention on Climate Change (UNFCCC). This is also to create awareness among the scientific community and to provide background information and progress of agriculture negotiation in relation to climate change.

United Nations Framework Convention (UNFCCC) on Climate Change

The UNFCCC entered into force with the objective of stabilizing greenhouse gas (GHG) concentrations at a level that would prevent dangerous anthropogenic interference with the climate system, and specifies that such a level should be achieved, *inter alia*, to ensure food production is not threatened (UN, 1992). The UNFCCC was also the first multilateral agreement on climate change to set a goal of reducing greenhouse gas emissions. Under the UNFCCC, the industrialized countries and countries undergoing the process of transition to a market economy (Annex I Parties; UN, 1992) have agreed to regularly report on their climate change policies and measures and submit an annual inventory of their GHG emissions to the to the Conference of Parties (COP), which is the supreme decision-making body of the Convention. The Non-Annex I Parties (UN, 1992), however, report on their adaptation and mitigation actions in more general terms and less regularly to the COP, provided that they receive necessary funding to do so.

Two technical bodies have been established under the UNFCCC at its first conference held in 1995, namely, the Subsidiary Body for Scientific and Technological Advice (SBSTA) and Subsidiary Body for Implementation (SBI).

The SBSTA provides timely information and advice to the COP on scientific and technological matters as they relate to the Convention. The SBI supports the work of the COP through assessment and review of the effective implementation of the Convention and its KP. The SBSTA and SBI, also work together on some cross-cutting issues relevant to their areas of expertise, and meet twice a year while the COP is an annual event. There are other constituted bodies (specialized entities) established under the UNFCCC to provide advice, technical input and expertise to advance the implementation of the Convention (https://unfccc.int/process/parties-non-party-stakeholders/non-party-stakeholders/submissions-from-non-party-stakeholders/constituted-bodies).

Twenty five COPs and 51 SBSTAs/SBIs have taken place to-date where the global community has negotiated extensively on the climate related policy matters.

Agriculture under UNFCCC

Agriculture is stated directly in the text of the UNFCCC on two occasions (UN, 1992), both in the Article 4 concerning Parties' commitments. The Article 4 (1)(c) requests Parties to "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". In this section, agriculture (and forestry) are identified along all other sectors. Article 4 (1)(e), which commits Parties to cooperate in preparing for adaptation to the impacts of climate

change, emphasizes a more specific role for agriculture emphasizing, *i.e.* "the development of appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas affected by drought and desertification, as well as floods". The word "Food" is stated one in Article 2, the objective of the Convention; i.e. "……..w*ithin 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.*" (UN, 1992)

The 9th COP (COP 9) held in Milan, Italy in December 2003, as mandated by the decision 10/CP.9, requested the 19th meeting of SBSTA (SBSTA 19) to initiate its work on scientific, technical and socio-economic aspects of impacts of climate change, taking into consideration vulnerability, mitigation and adaptation. Thereafter, the SBSTA 23 meeting held in Montreal, Canada in December 2005 requested the UNFCCC secretariat to organize workshops on specific themes. Consequently, an in-session workshop on climate change mitigation were held at SBSTA 24 in Bonn, Germany in May, 2006 focusing on agriculture, forestry and rural development. The issues covered in the workshop were (a) the potential of agriculture and forestry to reduce GHG emissions as part of global mitigation efforts, (b) the importance of international cooperation and support to promote technical innovation and technology transfer and to respond to developing countries' needs in these regards, (c) the need to develop options for mitigation according to national circumstances and regional differences, (d) potential co-benefits of mitigation action in the agriculture and forestry sectors, for example for water quality, biodiversity, and poverty alleviation, (e) socio-economic impacts of mitigation options and their spill-over effects, (f) the need for new technologies for mitigating GHG emissions from the agriculture sector that are cost effective and environmentally sound; and (g) the need to overcome barriers, for example, the lack of financial resources to develop and transfer technologies, and increase public awareness on the use of new technologies that reduce emissions (Drieux *et al.*, 2019; https://unfccc.int/files/methods_and_science/mitigation/application/pdf/mitigation_ws_sbsta24_chair_summary.pdf).

The COP 13 held in Bali, Indonesia in December 2007 created an *Ad Hoc* Working Group on Long-term Cooperative Action (AWG-LCA), where discussions on agriculture took place in several sessions. Based on the outcomes of the AWG-LCA, the COP 17 held in Durban, South Africa in November 2011 requested the SBSTA to consider issues relating to agriculture with the aim of exchanging views on a future decision to be adopted. This decision ensured a series of workshops held in SBSTA sessions.

Kyoto Protocol and Agriculture

The Kyoto Protocol (KP) to the UNFCCC was adopted in 1997, and set binding commitments to reduce emissions and entered into force in 2005. The KP was not ratified by all Parties who had signed the UNFCCC (including the U.S.A.). The KP lists the Annex 1 countries of UNFCCC in its Annex B, and indicates their quantified emission limitation or reduction commitment. Kyoto protocol addresses "agriculture" in three articles, namely Article 2 1.(a) (iii): "*Promotion of sustainable forms of agriculture in light of climate change considerations*", Article 3 4. "…… *changes in greenhouse gas emissions and removals in the agricultural soil and land use change and forestry categories*, ……," and Article 10 (b) (i): "…… *programmes containing measures to mitigate climate change and measures ……. would, inter alia, concern the energy, transport and industry sectors as well as agriculture, forestry and waste management. Furthermore, adaptation.* ……" (UN, 1998).

Agriculture Workshops at SBSTA sessions

Since 2012, the agriculture negotiations were supported by the SBSTA who held five in-session workshops to provide opportunities for Parties to exchange their views on issues relating to

agriculture. The first such in-session workshop was held at the SBSTA 39 in Warsaw, Poland in November 2013. The topic of the workshop was "Current state of scientific knowledge on how to enhance the adaptation of agriculture to climate change impacts while promoting rural development, sustainable development and productivity of agricultural systems and food security in all countries, particularly in developing countries (https://unfccc.int/resource/docs/2014/sbsta/eng/inf02. pdf).

Further, SBSTA 42 held in Bonn, Germany in June 2015 also had two in-session workshop, the first one on "The development of early warning systems and contingency plans in relation to extreme weather events and their effects such as desertification, drought, floods, landslides, storm surge, soil erosion, and saline water intrusion" (https://unfccc.int/resource/docs/2015/sbsta/eng/inf06.pdf) and the second one on "The assessment of risk and vulnerability of agricultural systems to different climate change scenarios at regional, national and local levels, including but not limited to pests and diseases (https://unfccc.int/resource/docs/2015/sbsta/eng/inf07.pdf).

Two in-session workshops were also held at SBSTA 44 in Bonn, Germany in May 2016. The first one was on the "Identification of adaptation measures, taking into account the diversity of the agricultural systems, indigenous knowledge systems and the differences in scale as well as possible co-benefits and sharing experiences in research and development and on-the-ground activities, including socioeconomic, environmental and gender aspects" (https: //unfccc.int/resource/docs/2016/sbsta/eng/inf05.pdf). Second workshop at SBSTA 44 was on "Identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience, considering the differences in agro-ecological zones and farming systems, such as different grassland and cropland practices and systems" (https://unfccc.int/resource/docs/2016/sbsta/eng/inf06.pdf).

Paris Agreement

Parties to the UNFCCC reached a landmark agreement in December 2015 to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future. This resulted in the Paris Agreement (PA; UN, 2015), which was built upon the UNFCCC, mapping a new course in the global climate effort.
The Paris Agreement, which aims to strengthen the global response to climate change by keeping a global temperature rise this century well below two degrees Celsius above pre-industrial levels, added a new dimension to the consideration of agriculture and food security under the UNFCCC. The agreement not only reiterates the need to ensure that food production is not threatened while reducing greenhouse gas emissions, but also recognizes the fundamental priority of safeguarding food security and ending hunger, as well as the particular vulnerabilities of food production systems to the impacts of climate change.

The PA was able to bring all nations into a common cause for the first time, to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so (https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement). The PA, while aiming to keep a global temperature rise in the 21st century well below 2 °C above pre-industrial levels, has added a new dimension to the consideration of agriculture and food security under the UNFCCC. The agreement not only reiterates the need to ensure that food production is not threatened while reducing greenhouse gas emissions, but also recognizes the fundamental priority of safeguarding food security and ending hunger, as well as the particular vulnerabilities of food production systems to the impacts of climate change (Drieux *et al.*, 2019). Of the 197 parties to the UNFCCC, 189 countries have ratified the PA (https://unfccc.int/process/ the-paris-agreement/status-of-ratification).

The PA refers to the word "food" three times, i.e. in the main text "*Recognizing the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production*

systems to the adverse impacts of climate change" and Article 2 1(b): *Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production*" (UN, 2015).

Koronivia Joint Work on Agriculture (KJWA)

A remarkable decision was made at the COP 23 to the UNFCCC held in Bonn, Germany in November 2017 to recognize the role of agriculture in tackling climate change, as the first substantive outcome and COP decision on agriculture, which has been under negotiation since 2012. The Decision 4/CP.23 (https://unfccc.int/decisions?search2=4%2FCP.23) requested the SBSTA and SBI to "*jointly address issues related to agriculture, including through workshops and expert meetings, working with constituted bodies under the Convention and taking into consideration the vulnerabilities of agriculture to climate change and approaches to addressing food security.*" The decision officially acknowledges the significance of the agriculture sector in adapting to and mitigating climate change, and highlighted that the agriculture negotiations have progressed into the next steps within the UNFCCC.

The Decision 4/CP.23 has invited Country Parties and observers to submit their views on elements to be included in the work by 31st March 2018, for consideration at the SBSTA 48 in Bonn, Germany in April–May 2018, starting with, but not limited to, (a) Modalities for implementation of the outcomes of the five in-session workshops on issues related to agriculture and other future topics that may arise from this work, (b) Methods and approaches for assessing adaptation, adaptation co-benefits and resilience, (c) Improved soil carbon, soil health and soil fertility under grassland and cropland as well as integrated systems, including water management, (d) Improved nutrient use and manure management towards sustainable and resilient agricultural systems, (e) Improved livestock management systems, and (f) Socioeconomic and food security dimensions of climate change in the agricultural sector.

Entitled as Koronivia Joint Work on Agriculture (KJWA; named after the Koronivia Research Station, Fiji's only agricultural research institution, in honour of Fiji who held the COP 23 Presidency), work carried out is only due for reporting back to COP 26 to be held in November 2020 in Glasgow, United Kingdom. The KJWA road map adopted by the parties (Figure 1) provides a timeline for in-session workshops on each of the six topics listed in Decision 4/CP.2 3, and call for submissions for each workshop, starting at SB 49 in December 2018 and ending in 2020. Their organization and reporting have been entrusted by the Subsidiary Bodies to the secretariat (Drieux *et al.*, 2019).

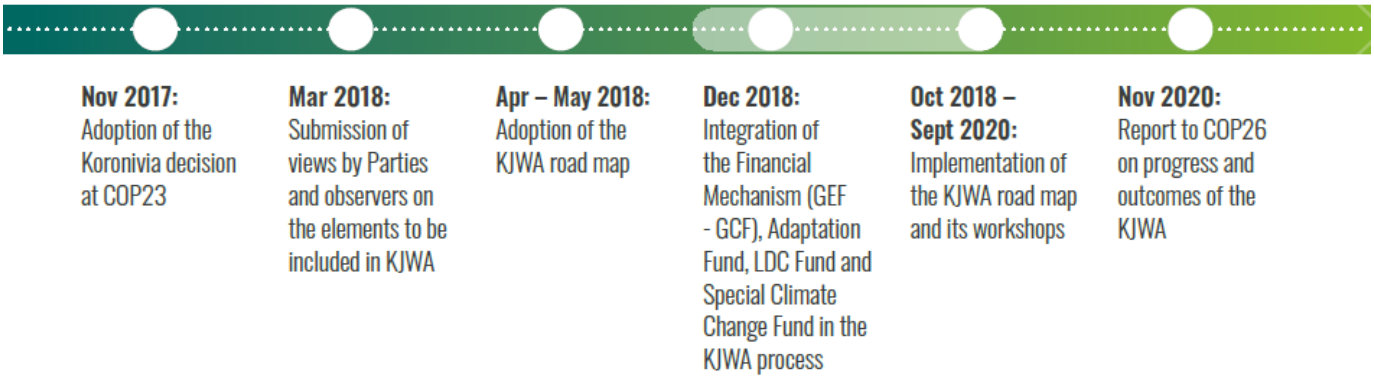

Figure 1. Roadmap adopted by parties for the Koronivia Joint Work on Agriculture (Source: Drieux *et al.*, 2019).

As per the road map agreed upon by the parties, the SBSTA 49 and SBI 49 (jointly called as SB here-in-after) held in Katowice, Poland in December 2018, a workshop in section 2(a) of the Decision 4/CP23 was held on "Modalities for implementation of outcomes of five previous in-session workshops on

issues relating to Agriculture and other future topics that may arise from this work", (https://unfccc.int/sites/default/files/resource/sb2019_inf1.pdf), two in-session workshops in SB 50 held in Germany in June 2019 on "2(b) Methods and approaches for assessing adaptation, adaptation co-benefits and resilience" (https://unfccc.int/sites/default/files/resource/sb2019_01E.pdf) and "2(c) improved soil carbon, soil health and soil fertility under grassland and cropland as well as integrated systems, including water management" followed by an in-session workshop on "Improved nutrient use and manure management towards sustainable and resilient agricultural systems". (https://unfccc.int/sites/default/files/resource/SB2019_02E.pdf). The fourth in-session workshop was held at the SB 51 in Madrid, Spain in December 2019 (during COP 25), on "Improved nutrient use and manure management towards sustainable and resilient agricultural systems".

The Future

Upon request of SBI and SBSTA to the Secretariat during SB 50, an additional inter-sessional workshop should be organized between SB 51 and SB 52 to be held in Bonn, Germany in June 2020) to contribute to the delivery the outcomes of the KJWA. This workshop is now scheduled to be held in Germany in March 2020. The elements considered for the inter-sessional workshop are (a) Sustainable land and water management, including integrated watershed management strategies, to ensure food security and (b) Strategies and modalities to scale up implementation of best practices, innovations and technologies that increase resilience and sustainable production in agricultural systems according to national circumstances. The SB 52 to be held in Bonn, Germany in June 2020 will consist of three in-session workshops, namely, "2(e) Improved livestock management systems, including agro-pastoral production systems and others" and "2(f): Socioeconomic and food security dimensions of climate change in the agricultural sector". All the workshop reports will be prepared for consideration of SBSTA/SBI 53 at COP 26 in Glasgow, United Kingdom in November 2020. For each session in SB52, Country Parties and observers have been requested to make submission, i.e. 20th April 2020 for 2(e) and 2(f) and submissions on future topics not listed in decision 4/CP.23 and views on the progress of the KJWA to be submitted by 28th September 2020.

The Paris Agreement not only reiterates the need to ensure that food production is not threatened while reducing GHGs, but also recognizes the fundamental priority of safeguarding food security and ending hunger, as well as the particular vulnerabilities of food production systems to the impacts of climate change. Adoption of COP Decision 4/CP.23 on the KJWA is a significant achievement in the process of agriculture negotiations under the UNFCCC creating an appropriate platform to push the climate related policies across and within countries, especially focusing on agriculture. Its implementation will thus, require combined efforts of Subsidiary Bodies, Constituted Bodies under the Convention and other relevant stakeholders (Drieux *et al.*, 2019).

Urgent and transformative actions led by all Parties, scientists, academia, researchers, farmers and private sector are needed to tackle the adaptation and mitigation challenges of climate change faced by the agricultural sector in a global scale. Further, fostering collaboration for development, financing, and implementation of practical solutions for climate change adaptation and mitigation in the agriculture sectors is a priority requirement. Public private partnership will be a cornerstone for this transformation.

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