

Info Note

The Paris Climate Agreement: what it means for food and farming

COP21 opens the door for more adaptation and mitigation in the agriculture sector

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DECEMBER 2015

Key messages

- The Paris Agreement opens the door for more adaptation and mitigation in the agriculture sector
- Countries must take urgent action to reduce emissions from the agriculture sector in order to limit global warming below 2 degrees C.
- Funding and political will are needed to support developing countries to implement their plans to combat and adapt to climate change in the agriculture sector
- The global agriculture community, including CGIAR, must step up and engage in key UNFCCC processes between now and 2020 to drive action and innovation on issues related to agriculture

- The preamble also refers to human rights, gender, ecosystems and biodiversity, all issues that are central to agriculture. The preamble also “recogniz[es] the importance of the conservation and enhancement, as appropriate of sinks and reservoirs of greenhouse gases referred to in the convention” which makes mitigation in agriculture possible.
- Article 2.1 of the agreement outlines its “aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty”. This includes actions for “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”.

In December 2015, parties to the United Nations Framework Convention on Climate Change (UNFCCC) agreed on a global climate change agreement to replace the nearly expired Kyoto Protocol. The Paris Agreement aims to limit the increase in global average temperatures to “well below two degrees C” and to pursue efforts to limit it to 1.5 degrees C, and will come into force in 2020. Food security and agriculture are not overlooked in the Paris Agreement. **In fact, the collective outcomes of COP21 offer many opportunities for action on food and farming – to be seized by the global agriculture community.**

Food security, food production, human rights, gender, ecosystems and biodiversity are explicit in the Agreement

- The preamble of the final agreement text makes specific reference to “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”.



An entrepreneurial farmer in Ethiopia has restored her soil by harvesting rainwater. COP21 has created new opportunities for farmers like her. Photo: G. Smith (CIAT)

The ambitious 1.5 degree C target offers some hope for farmers and food security

- The Paris Agreement aims to limit global temperatures “well below” two degrees C, and pursue a 1.5 degree target. As outlined by Campbell (2015), the debate between a 1.5 or two degree C target means different future scenarios for agriculture.
- For example, staple crops maize and wheat both show a trend towards greater yield losses at two degrees C than 1.5 degrees C.
- If global warming can be limited to 1.5 degrees, this will also produce fewer climate extremes than a two degree C temperature rise. This is good news for farmers in the tropics, as they will be on the frontline of heatwaves, droughts, floods and cyclones.

On the whole, country commitments to reducing emissions will not limit global temperature rise to two degrees

- The mitigation contributions outlined in the INDCs currently fall short of what is needed to deliver on the Paris Agreement. The decision text of the Paris Agreement “*notes with concern that the estimated aggregate greenhouse gas emission levels in 2025 and 2030 resulting from the intended nationally determined contributions do not fall within least-cost 2 °C scenarios but rather lead to a projected level of 55 gigatonnes in 2030*” (para 17).
- The text also notes that “*much greater emission reduction efforts will be required*” than what have already been put forward.

A 1.5 degree C target demands urgent mitigation in agriculture sector

- As noted by Campbell (2015) a 1.5 degree C target will require even more mitigation effort from the agriculture sector than a two-degree target. But even with a two degree C target, by 2050 we will likely run out of viable options for reducing emissions from the industrial, transport and energy sectors.
- Reducing emissions from agriculture will be imperative as it will be impossible to stay within either a 1.5 or two degree C target if agriculture does not contribute to emissions reductions.

Countries want to take action on adapting agriculture and reducing emissions from farming – but funds are not yet there

- A comprehensive analysis of agriculture in national climate plans by Richards et al (2015) reveals that agriculture is discussed in 80% of Intended Nationally Determined Contributions (INDCs).
- Considerable finance is needed for agricultural adaptation and mitigation by Least Developed Countries (LDCs) – in the order of USD 5 billion

annually (Richards et al. 2015). This sum, which may be an underestimate due to the small sample, is much higher than current commitments to climate funds for agriculture and is at least ten percent more per year than multilateral climate funds spent on agricultural projects in the last decade.

- It remains unclear exactly how developing countries will be supported to implement their INDCs.
- The Paris Agreement commits developed countries to set a new collective financing goal of at least USD 100 billion per year, “*taking into account the needs and priorities of developing countries*” (para 54), but does not include binding requirements on financial contributions by individual countries.
- The Green Climate Fund (GCF) and the Global Environment Facility (GEF) are entrusted to administer support for developing countries, particularly to implement national adaptation plans and actions.
- It remains to be seen if there is sufficient political will to move from business as usual to necessary action, and if countries will channel the much needed funding to where it is needed.

There is no binding requirement for countries to implement their intended contributions, but much emphasis on cooperation and public investment

- The decision text of the Paris Agreement does not put pressure on countries to implement the INDCs, but rather encourages countries to develop and share them, and collectively take stock of progress in 2018 (para 20), particularly in relation to progress against the 1.5 degree C target (para 21).
- The INDCs cover adaptation as well as mitigation, and the Paris Agreement recognises that different countries will need different balances to meet poverty reduction and development goals.
- Countries will submit new INDCs every five years, and are encouraged to enhance action ahead of 2020. “*Voluntary cooperation*” between countries, including through technology transfer and capacity building, is a major theme of the Agreement.
- The Agreement emphasises the need for all countries to support science and research, “*strengthening scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision- making.*” (Article 7).

Agriculture on SBSTA agenda in 2016

Issues related to agriculture are being discussed in a slow-moving parallel process under the Subsidiary Body for Scientific and Technological Advice (SBSTA), a process initiated in 2014

- Now is the time for countries and observers to prepare their submissions on agriculture to SBSTA. In SBSTA discussions held in parallel to COP21, discussions were on issues relating to agriculture. The resulting SBSTA conclusion notes the two agricultural workshops that took place in June 2015, and the two that are scheduled for June 2016, and decides to discuss the workshop reports at its upcoming sessions in May and November 2016.
- Countries and observers to the UNFCCC have until 9 March 2016 to make submissions on the identification of adaptation measures, and identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner.
- The SBSTA will work on a report to be presented at its November 2016 meeting, which will form the basis for a decision on agriculture, for example a possible work programme, at the SBSTA 45 in Morocco.

Next steps: 2016-2020

The Paris Agreement opens the door to further work on agriculture between now and 2020, when the agreement takes hold. This is the chance for the global agriculture community, including CGIAR, to step up and drive action:

- Support countries to implement INDCs in agriculture and food systems, via robust technical and institutional options, prioritization and metrics, and approaches for reaching scale. This includes helping Parties 'take stock' of progress on limiting emissions from all sources in 2018.
- Engage with the adaptation committee and LDC expert group to ensure modalities to recognize adaptation efforts can recognize adaptation in agriculture.
- Engage with the Paris Committee on capacity building, which will look at critical gaps and areas for action. It could also become a platform for agreeing to a common accounting methodology for agriculture, which is currently missing.
- Make submissions to the SBSTA 44 call on adaptation measures for agriculture, and assist Parties in reaching a consensus and plan for progress on agriculture.
- Contribute to the agriculture, food system, forestry and land use chapters of the IPCC's 6th Assessment Report (AR6), and assist with the IPCC's special report on agriculture and food security ahead of AR6.
- Give solid technical contributions to countries' applications to GCF and GEF to undertake actions on adaptation and mitigation in agriculture.

- Facilitate dialogue to coordinate action across sectors, particularly between forestry and agriculture and across the food-energy-water nexus, including biofuels.
- Bring agriculture into key UNFCCC forums, including the technical process on adaptation and the Lima work programme on gender.
- Establish partnership mechanisms that countries can invest in for equitable and efficient technology transfer and capacity building.
- Invest in public-private-civil-society initiatives linked to the UNFCCC, such as the 4/1000 Initiative.
- Act as a scientific partner to non-state actors who wish to implement or scale up climate-smart agriculture. For example, CGIAR will help develop metrics and track progress of the [World Business Council on Sustainable Development's work on climate-smart agriculture](#).
- Support countries in preparation of the next round of INDCs and their low greenhouse gas emission development strategies due by 2020 – ensuring strong agricultural components in both.

References and further reading

- Campbell B. 2015. Climate Change: Half a Degree Will Make a World of Difference for the Food We Eat. *Huffington Post*. 9 December 2015. <http://huff.to/1RNDSnY>
- CCAFS, CTA, Farming First. 2013. Guide to the UNFCCC negotiations on Agriculture. <http://bit.ly/UNFCCC-hp>
- Hedger M, Campbell BM, Wamukoya G, Kinyangi J, Verchot L, Wollenberg L, Vermeulen SJ, Minang P, Neufeldt H, Vidal A, Loboguerrero Rodriguez AM, Friis AE, Millan A. 2015. Progress on agriculture in the UN climate talks: How COP21 can ensure a food-secure future. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). <http://bit.ly/1NPyO0M>
- Richards M, Bruun TB, Campbell B, Gregersen LE, Huyer S, Kuntze V, Madsen STN, Oldvig MB, Vasileiou I. 2015. How countries plan to address agricultural adaptation and mitigation: An analysis of Intended Nationally Determined Contributions. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). <http://bit.ly/1Yfsotb>
- UNFCCC. 2015. Adoption of the Paris Agreement. Proposal by the President. (FCCC/CP/2015/L.9/Rev.1). 12 December 2015.
- UNFCCC. 2015. Issues relating to agriculture. Draft conclusions proposed by the Chair. (FCCC/SBSTA/2015/L.17). 3 December 2015.

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