

Info Note

Progress on agriculture in the UN climate talks

How COP21 can ensure a food-secure future

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Key messages

- A 2015 climate agreement should reference food security and provide the financial, technical and capacity building support for countries to devise ambitious actions for the agricultural sector.
- The various components of an expected COP21 agreement that relate to agriculture could be made more coherent as action unfolds after Paris.
- The significance of the role of agriculture in supporting a secure sustainable development pathway is evident from the first round of the Intended Nationally Determined Contributions (INDCs); several INDCs even recognize potential synergy between adaptation and mitigation in this sector.
- INDCs present opportunities for progress at the national level on mitigation and adaptation, and challenges to improve accounting methodologies for land use emissions.
- Climate finance should include agriculture as a key sector for INDC implementation support.
- CGIAR will support action on agriculture under the Lima-Paris Action Agenda (LPAA), which recognizes the efforts of non-state actors to address climate change.

Agriculture, and consequently food security and livelihoods, is already being affected by climate change, according to latest science from the IPCC (Porter et al. 2014). The IPCC agrees that the world needs to produce at least 50% more food than we do today in order to meet the goal of feeding a projected 9 billion people by 2050. This must be achieved in the face of climatic variability and change, growing constraints on water and land for crops and livestock, and declining wild capture fishery stocks.

Although the protection of food security lies within the core objective of the United Nations Framework

Convention on Climate Change (UNFCCC) (Article 2), formal arrangements for addressing agriculture within COP21 are unlikely. CGIAR would welcome the strengthening of aspirations for food security through action on mitigation and adaptation within a new agreement. We recognise that the new climate agreement is unlikely to be prescriptive about how adaptation in agriculture is supported and how agriculture might contribute to emission cuts. These issues are addressed within countries' INDCs and determined at national level.

Core concerns

CGIAR considers that there is scope for greater coherence to strengthen the various strands of work already underway on agriculture within the UNFCCC process. We will continue to contribute to technical development for a clearer role for agriculture and greater integration of the land use sector. Through the Intended Nationally Determined Contributions (INDCs), countries will chart their own pathways and there is a need to provide ideas and knowledge that can support their contributions as they are generated. Submissions and workshops on agriculture under the Subsidiary Bodies for Scientific and Technological Advice (SBSTA), due to be completed in 2016, should enhance knowledge for the package of new approaches following COP21.



*Agriculture is central to adaptation and mitigation, according to country plans submitted to the UNFCCC
Photo: S. Kilungu (CCAFS)*

CGIAR will continue to support the concept of climate-smart agriculture (CSA), a comprehensive approach for transforming and reorienting agricultural systems to support food security under climate change (Lipper et al. 2014). Under this umbrella it is crucial to consider how vulnerable groups, women and men farmers, smallholders and large scale producers and players in commodity value chains adapt and mitigate, where appropriate, climate change. Climate change threats can be reduced in some regions by increasing the adaptive capacity of farmers; increasing resilience and resource use efficiency in agricultural production systems, landscapes and food systems; improving seasonal forecasts and early warning systems; and improving the capacity of producers and managers to understand and integrate scientific information in their decision making processes. In some regions there may be significant challenges in scaling up climate-smart agriculture. We support the view that the UNFCCC is the primary international, intergovernmental forum focused on addressing climate change.

We believe the 2015 agreement should reinforce the reference to food production in Article 2, as there is now evidence from the IPCC that production and food security are already being compromised. A 2015 agreement should create momentum for countries to devise ambitious actions for the agricultural sector, by providing the financial, technical, and capacity building support needed to help developing countries implement adaptation strategies and low emissions agricultural development. Investment in such support should help agriculture not only to meet mitigation goals but also to achieve food security and climate change adaptation. Support for these latter goals should be explicit in funding and technical packages from all funding sources. We recognise that mitigation will continue to be driven by national development priorities and be a co-benefit of sustainable development.

We envisage that the new climate agreement will complement the Sustainable Development Goals (SDGs) and provide a shared vision on sustainable development to give a signal on the low carbon economy.

Climate change is explicitly included as one of the 17 SDGs and is embedded in all SDGs at least implicitly. CGIAR welcomes the fact that within potential text for the Preamble to a Paris agreement the significance of sustainable development is recognised together with the importance of food security. Reference is also made to land use issues and the vital role of sinks.

Progress under the UNFCCC on agriculture and food security is dependent on a finance and technology package. It is essential that the Green Climate Fund (GCF) provides specific, stable and long-term support to adaptation and mitigation in agriculture, with specific

efforts targeted at women farmers and youth in agriculture. For many developing countries that will be hard hit by climate change - and these mostly have low greenhouse gas emissions, (see Richards et al 2015b) - finance and technological support will be crucial in turning INDCs into actions. A 2015 agreement should create mechanisms that enable **ambitious contributions from the agricultural sector**, while also providing the **financial, technical and capacity building support** needed to help developing countries implement low emissions agricultural development.

CGIAR's perspective on current issues

Agriculture has become embedded in several strands under the UNFCCC, including NAMAs, NAPs, INDCs and SBSTA, as discussed below. This progress is welcome, as we believe that the stakes are too high to delay work on agriculture in view of time taken for research, technical analysis, policy generation and institutional development to bring change on the ground. Ideally, a new international climate action framework coming from Paris will enable and boost these important developments.

To respond urgently and to prepare for further climate change challenges ahead, CGIAR has identified four priority areas for action on climate change: (i) climate-smart agricultural practices, (ii) climate information services and climate-informed safety nets, (iii) low emissions agricultural development where coordination across land use sectors and food system sectors will be critical for success, and (iv) policies and institutions for climate-resilient food systems.

NAMAs, NAPAs, NAPs and INDCs

Past experience, with the preparation of National Adaptation Programme of Action (NAPAs), National Adaptation Plans (NAPs) and Nationally Appropriate Mitigation Actions (NAMAs), and initial analysis of INDCs, shows that once the focus moves from international negotiation to implementation, agriculture and food security issues assume major importance in national policy-making discussions (see Box 1). Furthermore, agriculture and food security have been targets for financial support from the Least Developed Countries Fund through the NAPAs and Pilot Program for Climate Resilience, which align funding allocations with national priorities, and are a target for support by the GCF. The NAP process was established in 2010 as a mechanism for countries to address climate vulnerability, building their capacity to adapt to current and future climatic changes. A key focus is to integrate climate change adaptation into development planning processes and strategies across all sectors and at local to national scales, which was where NAPAs were weak. Under the NAP process, many countries have conducted some or other form of impact assessment, usually on a sectoral basis. Many countries are now preparing their NAPs as revealed in their INDCs.

Box 1. NAMAs and agriculture

In 2012, at least 21 officially submitted NAMAs referred to agricultural activities and at least 30 developing countries had expressed interest in implementing agricultural NAMAs. Plans suggest that significant mitigation potentials are possible. Agriculture is one of the largest sources of emissions for many developing countries, including in the major emitter countries of China, India and Brazil. Mitigation in the agricultural sector is also a focus of many INDCs, including from developing countries.

Agricultural practices considered for NAMAs have most commonly focused on improved agronomic practices, carbon storage, and reduced forest conversion on agricultural land. Improved economic performance, efficiency and often climate change adaptation are potential benefits from many of these practices.

According to Wilkes et al. (2013), middle income and emerging countries have progressed most quickly in designing and implementing NAMAs, with domestic political processes and the availability of finance being important enabling factors for example in Brazil, Costa Rica, Kenya and Mongolia.

A November 2015 analysis of INDCs submitted so far shows that both mitigation and adaptation dimensions of climate action address land use issues (Richards et al. 2015a). All Parties communicate greenhouse gas (GHG) reduction targets; of these 80% encompass land use change and 64% specifically include agriculture. Agriculture is particularly important in the contributions of non-Annex 1 countries, which are counting on international assistance to meet their targets. Overall, more than half the Parties refer to food security and 102 of the 113 Parties that include adaptation in their INDCs (90%) give agriculture as an adaptation priority. However, only about one-third address gender.



Dedicated climate finance is needed to support implementation of adaptation and mitigation actions on agriculture. Photo: C. Schubert (CCAFS)

Next steps

CGIAR sees a full agenda ahead, including:

1. INDCs

Whilst INDCs seem likely to provide the basis for a Paris climate agreement, their precise role is not yet determined. However, CGIAR recognises their significance in producing coherence at national level, and notes that they benefit from having generally been the result of national stakeholder and consultation processes.

According to the UNFCCC Secretariat Synthesis, this first round in 2015 has revealed that there are major issues of uncertainty surrounding approaches used on emission and scenarios for the Land Use, Land-Use Change, and Forestry (LULUCF) sector (UNFCCC 2015a). In fact a few Parties have even gone so far as to make their INDCs conditional on the establishment of an effective set of accounting rules and guidelines. There are major challenges on the aggregate assessment of outcomes with these major sources of uncertainty (UNFCCC 2015a).

CGIAR foresees that once measurement and reporting arrangements are finalised, there will be several technical issues around Agriculture, Forestry and Other Land Use (AFOLU) to address. For example, providing supplementary guidance to the 2006 IPCC guidelines is required to update emissions factors and make use of improved data in developing countries, especially to better reflect nitrous oxide management in agricultural systems.

As part of support to the mobilisation of effort at national level to implement INDCs, and to help subsequent submissions, CGIAR will assist with increased attention to gender and social inclusion, which so far has not received enough attention.

CGIAR will support work on delivering synergies on the mitigation and adaptation agendas – its potential which has been recognised in analyses of submitted INDCs (Richards et al. 2015a; UNFCCC 2015a).

2. SBSTA

The SBSTA work plan puts off a substantive COP decision on agriculture until after 2016 and this decision may relate largely to adaptation. Preparation is needed for the SBSTA submissions and workshops in 2016 on the identification of adaptation measures, and identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner.

3. Finance flows

CGIAR recognises that finance is a critical issue. It is clear that the provision of funding for climate-smart agriculture is far from secure.

A new agreement will need global mobilisation of finance to help developing countries respond to climate change; the current goal is \$100 billion per year by 2020. There are contested proposals about what the balance between private and public finance, and the contributions by different countries and parties.

Recent analysis undertaken at the UK's Overseas Development Institute (ODI) shows that dedicated climate funds programmed very modest sums of finance for agriculture over the last decade, compared with other sectors (Norman 2015). Between 2006 and July 2015, eight dedicated multilateral funds tracked by ODI and Heinrich Boell Stiftung Climate Funds Update approved over \$744 million across 112 projects with a primary focus on agriculture (Norman 2015). This represents just 7% of approved finance from dedicated climate funds over the period. As a comparison, dedicated multilateral climate funds allocated 10% of the overall \$10.6 billion in approved finance to forestry focused projects and activities and 33% to climate compatible energy generation and supply over the same period. Normal Overseas Development Assistance (ODA) spend on agriculture overshadows climate finance too. Between 2006 and 2013 over \$30 billion was spent on agriculture according to the OECD database (Norman, 2015).

The majority of climate finance for agriculture (96%) supports adaptation activities, with just 2% of finance approved by climate mitigation and forestry/REDD+ focused funds and an additional 2% supporting both mitigation and adaptation outcomes within the agricultural sector (Norman, 2015). This contrasts with climate finance across all sectors, which is largely targeted at mitigation rather than adaptation (Buchner et al. 2015).

Other significant dedicated funds include the Least Developed Countries Fund, which has programmed around 33% of its approved finance on agriculture, food security and sustainable/improved land management outcomes (Norman 2015). It can also be noted that the Global Environmental Facility (GEF) is taking a number of steps towards increasing levels of financing aimed at low emissions agriculture, improving land use and indirect emissions methodologies and including land use (GEF 2014), particularly climate-smart agriculture within the GEF-6 financing period (GEF 2013).

CGIAR considers that more analysis needs to be undertaken to see how much climate finance is available, how it is being used, and how to use it more effectively. Additionally, further analysis is needed on the emerging outcomes from investments from all sources (public and private finance) to see what lessons can be learned for scaling up and to

ensure the sector, and more specifically adaptation actions, receive an appropriate share of financing.

4. Finance institutions: the GCF

The operationalisation of the GCF as the central funding mechanism of the UNFCCC, is well underway with \$10.2 billion has been pledged as of November 2015.

After intense discussions, the Board approved all eight projects up for decision in October 2015, amounting to \$168 million in total funds (GCF 2015a). These first project approvals mark an important milestone for the GCF.

Of the 8 projects approved so far, 6 are focused on adaptation. Two have close implications for agriculture:

- **Increasing the Resilience of Ecosystems and Communities** through the Restoration of the Productive Bases of Salinized Lands, in Senegal, with CSE (GCF funding: \$7.6 million).
- **Supporting Vulnerable Communities** to Manage Climate Change Induced Water Shortages, in Maldives, with UNDP (GCF funding: \$23.6 million).

The GCF has been cautious about its approach so far on agriculture with issues raised at the 9th Board meeting of April 2015 about supporting sustainable climate-smart agriculture (with stated intended impacts for mitigation and adaptation in forestry and land use, livelihoods of people and communities; food and water security and health; and ecosystems and ecosystem services) (GCF 2015).

In addition, there is controversy about whether it provides grants or loans. Overall, the Board is still developing its approach as are project implementers as many recently submitted proposals to the 11th Board Meeting were not complete and did not fulfil GCF criteria and preparedness and could not be considered (GCF, 2015a). The Board agreed to provide an additional \$14 million for readiness support which can also help the preparation of NAPs. Readiness and preparatory support is a priority for the GCF to enhance country ownership. So far 17 countries are benefitting from readiness support and the total number of requests received is 87 (GCF 2015b).

One area for immediate attention for CGIAR will be to ensure the GCF can help to deliver adaptation strategies and low emissions strategies for agriculture.

4. Technology transfer and capacity development

The transfer of technology is a core part of the UNFCCC Technology Mechanism.

A recent synthesis of Technical Needs Assessments (UNFCCC 2013) showed that the agriculture, forestry and other land uses sector targeted both adaptation and

mitigation, and mainly included actions to combat land degradation, rules and regulations for seeds, better management of renewable natural resources, agricultural modernization and natural resource management, combating desertification and improving food security.

In 2014, the Climate Technology Centre and Network (CTCN), as part of the Technology Mechanism, became fully operational and there is growing demand from Parties, via their National Designated Entities, requesting support for tailored responses to implement their technology-related climate plans. The CTCN's mandate is to respond quickly to these requests, which are limited in volume (up to \$250 000) and fairly quick in their implementation (generally 1 year), to avoid competing with other facilities and funding sources that enable and implement technology transfer. Many of the requests that have come in so far are addressing issues related to agriculture and natural resource management, mainly in terms of improving responses to climate impacts, and are based on national climate change priorities as described in NAPs, NAPAs or national climate change strategies.

The advantage of the CTCN (and potentially other technology transfer instruments) is its high flexibility, quick response time and low cost. As the operation of CTCN is led by UNEP in collaboration with a number of highly qualified and regionally distributed research and development organizations (including the World Agroforestry Centre from the CGIAR), the responses are taken out of the political realm and are addressed with the necessary technical understanding. Many of the requests from countries are in the area of natural resource management, primarily agriculture. Several projects have been completed, for instance in Mali, Côte d'Ivoire and Chile, and several others are in the pipeline. It is expected that the number of national requests will rise significantly in the coming years, suggesting that this instrument can be highly effective at carrying out important capacity building work that will lead to greater investments through international funding streams (e.g. GCF and GEF) and the ODA.



Countries need support developing and implementing targeted solutions for agriculture. Photo: S. Kilungu (CCAFS)

Agriculture has been identified as an important area for capacity development. As a result, it is very likely that this country-driven and voluntary instrument will become an important tool in supporting context-specific and targeted solutions for agriculture in developing countries.

5. Equitable outcomes for women

Gender has now been mapped across all aspects of the UNFCCC's functions and its mainstreaming will be overseen by the Subsidiary Body for Implementation (SBI). This provides an opportunity to develop agriculture initiatives that have gender-sensitive strategies. Climate change will add to the challenges that vulnerable and poor women face in securing incomes, personal freedoms, water, food and fuel. A policy brief by CGIAR and partners (Huyer et al. 2015) recommends that gender-responsive climate policies and programmes include:

- A gender component as a qualifying criterion to access international funding.
- Design that is informed by needs assessments that distinguish women's and men's needs and priorities.
- Monitoring and assessment indicators of real change in gender and social inclusion.

6. Agriculture in the REDD+ mechanism

REDD+ is a voluntary mechanism within the UNFCCC to provide incentives to reduce carbon emissions from deforestation and forest degradation in developing countries. A 2012 review agriculture to be the major driver of deforestation. Commercial agriculture was the major driver of deforestation, accounting for 50%, with subsistence agriculture as the second most important driver, accounting for 30% of the deforestation (Hosonuma et al. 2012). National strategies from 43 countries have been assessed to understand how countries were integrating the knowledge of drivers into national REDD+ programs (Salvini et al. 2014). The study found that most countries do not address drivers of deforestation but rather aim to improve forest management, cook stoves and agroforestry, suggesting challenges in addressing the expanding agriculture frontier. A recent study has shown that fiscal incentives, many related to agriculture, are a key driver of deforestation and forest degradation because they outweigh the support provided by REDD+ (McFarland et al. 2015).

CGIAR supports greater efforts on dialogue and policy to manage the role of agriculture in driving deforestation. CGIAR notes that the GCF is likely to be the major conduit of resources to national REDD+ activities in the near to medium term. One of the Fund's first activities was to operationalize results-based payments for REDD+.



Empowering rural women to take action on climate change is a key strategy for ensuring food security. Photo: N. Sigtia (IWMI)

7. Agriculture in the Lima-Paris Action Agenda

An innovative aspect of the Paris COP is the recognition of the efforts and potential of all non-state actors to address climate change, via the Lima-Paris Action Agenda (LPAA). CGIAR will help implement and support initiatives that ensure agriculture plays its part in climate change adaptation and mitigation under the UNFCCC process. This includes joining the “4/1000 Initiative: Soils for Food Security and Climate”, which will be launched in Paris by a coalition of French research agencies. Designed with ambitious targets to restore soils and soil carbon, the initiative is a good example of how both mitigation and adaptation can be synergistic. CGIAR will also act as scientific partner and critical friend to the World Business Council on Sustainable Development’s work on climate-smart agriculture under the LPAA.

8. Bringing external expertise into the UNFCCC process

Frameworks for bringing external expertise directly into the negotiations include Technical Expert Meetings (TEMs) and Structured Expert Dialogues (SEDs). The TEM held in the June 2014 ADP meeting shared country experience on issues related to land use (including agriculture) and another workshop was held at the Bonn 2015 meeting. CGIAR gave evidence at the SED in February 2015, which explored food security and agriculture. TEMs and SEDs are meant to explore new options and actions and share local and regional experiences that could feed into the negotiations but are not an integral part of the negotiation process. Nonetheless, the agricultural community can continue to engage closely in TEM and SED discussions where possible, to bring new knowledge into the negotiations to inform specific areas for future work. There may also be a Technology and Knowledge Platform established under the Adaptation Committee, which will look amongst other issues at the sustainable management of ecosystems

(UNFCCC 2015b). CGIAR would support such an approach.

Significant work to bridge any Paris Agreement and more action in the UNFCCC will be explored within a proposed Intergovernmental Preparatory Committee (IPC) and CGIAR will look to support any work needed on issues relating to agriculture.

CGIAR with its partners will continue to:

- Provide technical support to countries on UNFCCC related issues, including:
 - Implementation of INDCs
 - GCF project development
 - Preparatory work for SBSTA submissions and workshops
 - Technology transfer projects
- Work through research partnerships with countries to achieve sustainable development, poverty reduction and improved food and nutritional security while coping with climate variability and change;
- Undertake analysis of agencies and institutions that will support national progress on agriculture and natural resource management;
- Work on integration of adaptation and mitigation interventions in land-use sectors, within the framework of food security;
- Assist countries in achieving low emissions development in agriculture and forestry sectors;
- Support improved measurement and reporting systems for assessing emissions and GHG emissions reductions;
- Do research to support integration of LULUCF, REDD+ and agricultural development objectives and explore how transformative integration through land based projects could be a focus of the GCF.

Summary of recommendations

- Parties are urged to strengthen aspirations for food security through action on adaptation and mitigation in the 2015 agreement.
- A 2015 agreement should create mechanisms that enable ambitious contributions to both adaptation and mitigation from the agriculture sector.
- Increased attention to gender and social inclusion in a new agreement is urgently needed.
- A 2015 agreement must provide financial, technical, and capacity building support to developing countries.

- The new agreement needs global mobilization of finance to help developing countries respond to the climate change challenge.
- The Green Climate Fund must provide specific, stable and long-term support to adaptation and mitigation in agriculture.
- Parties should use the SBSTA workshops in 2016 to enhance knowledge, technology transfer and capacity development for new approaches in agriculture following COP21.

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