

## Technical contributions

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# International Initiatives for Collective Action to Confront Climate Change in the Agricultural Sector

**The challenge:** Given the significant impacts that climate change and agriculture have on each other, it is critically important that this sector become engaged in the resolution of what is becoming a compounding problem of far-reaching consequences. The agricultural sector produces 14% of global greenhouse gas emissions (24% if emissions from the entire agriculture, forestry and other land use sector are considered)<sup>1</sup> and is the largest emitter of methane. Agriculture is also extremely vulnerable to the impacts of climate change, which is decreasing the sector's ability to provide

food security, reduce poverty and contribute to rural development goals, and comes at a time when global demands for food, fiber and fuel are all increasing. The challenge of addressing climate change facing the agricultural sector is daunting, and will require significant and sustained collective efforts to decrease risk, enhance resilience, and avoid severe negative consequences. Efforts made to both mitigate and adapt to climate change within the sector are increasingly critical, not only for food and nutrition security, but also for rural livelihoods, economic development, and poverty reduction.

<sup>1</sup> IPCC, 2014: Summary for Policymakers, In: Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

The purpose of this brief is to provide the Ministries of Agriculture in the Western Hemisphere with up-to-date information on the recent opportunities arising as a result of international efforts to address climate change, from the perspectives of adaptation, mitigation, and productivity. The initiatives presented here<sup>2</sup> are all nascent efforts; all of them began within the last four years and each is growing in momentum.

The new Global Alliance for Climate-Smart Agriculture is the broadest effort as it promotes a balanced focus on mitigation, adaptation and productivity. Others, including the Climate and Clean Air Coalition (CCAC), the Global Research Alliance (GRA), the Tropical Forest Alliance 2020 (TFA 2020), and the Bonn Challenge focus their efforts on mitigation, with the latter two accomplishing this through reducing deforestation and restoring degraded lands, respectively. Two initiatives, the GRA and Alliance, are specific to the agricultural sector. All, however, look to promote synergies between adaptation and mitigation and co-benefits (e.g., improved natural resource management) where possible. Only one, the proposed Twenty by Twenty Initiative, is specific to the Americas; the rest are global in scope.

**Benefits of Affiliation:** Participation in these international initiatives can provide several benefits for member countries. These include increased awareness of how country-level commitments and actions will contribute to resolving this critical global challenge. They can also assist countries to identify like-minded allies, discover synergies, and increase the impact of their individual actions through linking with others. Uniting behind these initiatives will help countries to combine their collective expertise and resources and make the greatest progress possible in the shortest period of time. Some countries are already members of several such initiatives, but oftentimes the agricultural sector has not yet been included. If you would like more information about any of these initiatives, please feel free to contact IICA and/or visit the respective websites using the links provided.

*“All aspects of food security are potentially affected by climate change, including food access, utilization, and price stability... Global temperature increases of ~4°C or more above late-20th-century levels, combined with increasing food demand, would pose large risks to food security globally and regionally (high confidence).”<sup>3</sup>*



*“Major future rural impacts are expected in the near-term and beyond through impacts on water availability and supply, food security, and agricultural incomes, including shifts in production areas of food and non-food crops across the world (high confidence).”<sup>4</sup>*

<sup>2</sup> The information on the initiatives described here has been collected from the websites cited in the text.

<sup>3</sup> IPCC, 2014: Summary for policymakers. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, p 18.

<sup>4</sup> Ibid, p. 19

### Global Alliance for Climate Smart-Agriculture

The Alliance will benefit governments, farmer's organizations, scientists, businesses, and civil society, as well as regional unions and international organizations, as they seek to adjust agricultural practices, food systems and social policies in response to climate change impacts on food and nutrition security. Members of the Alliance are committed to supporting sustainable increases in the productivity of food systems through the responsible use of natural resources, the adaptation of people's livelihoods that are threatened by climate change, and agricultural practices that contribute to reduced emissions and decreased deforestation as a result of agriculture. The Alliance will be a force for substantive transformation in ways that bridge traditional sectoral, organizational and public/private boundaries. As the Alliance pursues this vision, it will support and coordinate with other international endeavors that concern agriculture, food security and climate change.

The Alliance was formally launched after the UN Secretary General's Climate Summit in late September of 2014 in New York City. At the event, 20 Governments and more than 40 organizations and companies announced they were joining and many made commitments to invest in or take action to contribute to the goals of the Alliance.

**Objective:** The Alliance recognizes the urgent need to act at scale and to contribute towards three aspirational outcomes:

- Sustainable and equitable increases in agricultural productivity and incomes;
- Greater resilience of food systems and farming livelihoods; and
- Reduction and/or removal of greenhouse gas emissions associated with agriculture (including the relationship between agriculture and ecosystems), wherever possible.

**Constituency:** Governments (from countries at all levels of development), businesses, civil society groups, producer organizations, research bodies and intergovernmental entities.

**Participation:** Voluntary, non-binding

**Resource Provision:** Collaborative consultation and access to information, experiences, expertise, contacts and support.

**Current Activities:** The first meeting of the members of the Alliance will take place on December 17-18, 2014 in Rome to agree upon an initial work plan for the first year. Prospective members can join in advance so that they can fully participate in the Alliance deliberations from the outset.

There are three initial action areas, one focusing on investment (facilitated by the World Bank and IFAD), another on knowledge (facilitated by FAO and CCAFS), and a third on an enabling environment (facilitated by South Africa, Vietnam and The Netherlands). These groups are holding both virtual and face-to-face meetings to advance their work.

**Current Regional Participation:** Costa Rica, Grenada, Mexico, United States of America

**How to Collaborate:** Membership will be conferred upon receipt by the Facilitation Unit (of a letter stating that the entity subscribes to the Alliance Framework; and identifying a primary point of contact with name, title, and contact information for communications with the Alliance. The Interim-Secretariat can be contacted at: [interim@csaalliancesecretariat.org](mailto:interim@csaalliancesecretariat.org)

**ACSA Web Site:** <http://www.fao.org/climate-smart-agriculture/85715/en/>



## Agriculture Initiative of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC)



Started in February of 2012, the CCAC provides a forum for tackling short-lived climate pollutants (SLCPs) and for mobilizing the resources necessary to speed up action. The CCAC works to support existing efforts and promote new actions to address climate change and the linked food, energy security, and environmental issues. The United Nations Environmental Programme (UNEP) hosts the CCAC Secretariat. One of the key initiatives under the CCAC is to address SLCPs from agriculture.

**Objective:** Address short-lived climate pollutants by:

- Raising awareness of short-lived climate pollutant impacts and mitigation strategies
- Enhancing and developing new national and regional actions, including by identifying and overcoming barriers, increasing capacity, and mobilizing support
- Promoting best practices and showcasing successful efforts
- Improving scientific understanding of SLCPs impacts and mitigation strategies

**Constituency:** Governments, NGOs, regional/international organizations, private sector, civil society organizations

**Participation:** Voluntary, non-binding upon endorsement of the Coalition Framework and meaningful action to address SLCPs, and approval of participation by all current state partners.

**Resource Provision:** Expertize, high level fora of key committed stakeholders, technical and associated funding opportunities

**Current Activities:** The CCAC agriculture initiative has agreed to proceed with the following three activity areas:

- **Livestock and Manure Management:** Increased awareness and improved stakeholder (farmers

and policymakers) capacity to implement best practices, introduction of policies enabling improved manure management, and active networks among practitioners and organizations to share experiences and generate partnerships that accelerate manure management adoption. Key near-term deliverables are a Global Information Kiosk, three regional centers (in Costa Rica, Ethiopia, and Thailand), and high-impact projects in Asia, Africa, and Latin America.

- **Paddy Rice Production:** Identify (1) alternate wetting and drying (AWD) best management practices in irrigated paddy rice that achieve both mitigation and food security and (2) incentives, technical support mechanisms, and enabling conditions to overcome the barriers that men and women farmers face in using the new practices. The program will target one country as a regional hub in each of Southeast Asia (Vietnam), South Asia (Bangladesh), and Latin America (Colombia) to develop initiatives for up-scaling mitigation at the national level.

- **Open Agricultural Burning:** Develop replicable and scalable open burning mitigation options in the Eastern Himalayas and Andes. These options will emerge from (a) determining the nature of open burning [who burns what, when, where and why]; (b) creation of regional open burning information sharing networks; and (c) the development of shovel-ready pilot mitigation projects with specific actions targeted to each region and crop type.

**Current Regional Participation:** Canada, Chile, Colombia, Dominican Republic, Mexico, Peru, United States of America

**How to Collaborate:** Send a letter to the Head of the Secretariat that includes an endorsement of the Coalition Framework and meaningful action to reduce SLCPs, identifies areas of interest related to SLCPs, any actions taken or planned to address them, and identifying a point of contact. More information can be found at <http://www.unep.org/ccac/HowtoJoin/tabid/130305/language/en-US/Default.aspx>.

**CCAC Website:** <http://www.unep.org/ccac/Initiatives/AddressingSLCPsfromAgriculture/tabid/131773/language/en-US/Default.aspx>

### Global Research Alliance on Agricultural Greenhouse Gases (GRA)



Formally established in June of 2011, the Global Research Alliance (GRA) focuses on research on agricultural greenhouse gas emissions. It concentrates its efforts on livestock, paddy rice and cropland, and has two cross-cutting groups focused on soil carbon and nitrogen cycling, and inventory and measurement. The GRA now has over 40 member countries working together to determine how to increase productivity without increasing emissions. New Zealand currently hosts the rotating Secretariat.

**Objective:** Research, development, and extension of technologies and practices that will help deliver ways to grow more food (and more climate-resilient food systems) without increasing agricultural greenhouse gas emissions.

**Constituency:** Governments and partner organizations

**Participation:** Voluntary, non-binding upon endorsement of the Charter.

**Resource Provision:** Financial (although there is no central funding mechanism) and technical.

**Current Activities:** Each of the five groups has developed work plans that bring countries and partners together to collaborate on research, knowledge sharing, the exchange of best practices, and capacity development - all with the goal of moving towards solutions that reduce agricultural greenhouse gas emissions.

**Current Regional Participation:** Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Ecuador, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, United States of America, Uruguay

**How to Collaborate:** Membership is open to any State represented by its competent authority (e.g., the nominated lead government department or agency for involvement in the Alliance). Membership is obtained when a country formally endorses the Charter

(governing document), and members freely determine the scope of their participation. For more information, contact: [secretariat@globalresearchalliance.org](mailto:secretariat@globalresearchalliance.org).

**GRA Website:** <http://www.globalresearchalliance.org/>



### Tropical Forest Alliance 2020 (TFA 2020)

The Tropical Forest Alliance 2020 (TFA 2020) will catalyze and coordinate actions by governments, the private sector, and civil society to reduce the tropical deforestation linked to key agricultural commodities (specifically palm oil, soy, beef and paper/pulp) by 2020. Launched in June of 2012, this initiative will help the Consumer Goods Forum<sup>5</sup> achieve its goal of “zero net deforestation by 2020” from key primary products in their supply chains.

TFA 2020 is a public-private partnership in which partners take voluntary actions, both collectively and individually, to address the drivers of tropical deforestation using a range of market, policy, and communications approaches. The Meridian Institute serves as the Interim Secretariat.

<sup>5</sup> A private sector organization that involves the CEOs of over 400 consumer goods manufacturers and retailers, including Coca-Cola, General Mills, Kraft, Kroger, Pepsi Co, Unilever and Walmart.

**Objectives:**

- Improve planning and management related to tropical forest conservation, agricultural land use, and land tenure.
- Share best practices for tropical forest and ecosystem conservation and commodity production, including working with smallholder farmers and other producers on sustainable agricultural intensification, promoting the use of degraded lands, and reforestation.
- Provide expertise and knowledge to assist with the development of commodity and processed-commodity markets that promote the conservation of tropical forests.
- Improve monitoring of tropical deforestation and forest degradation to measure progress.

**Constituency:** Governments, private sector, civil society.

**Participation:** Voluntary.

**Resource Provision:** None.

**Current Activities:** A meeting in Indonesia focusing on palm oil was held at the end of 2013. Meetings on beef and soy are being discussed for 2014, likely in Brazil or Colombia.

**Current Regional Participation:** United States of America

**How to Collaborate:** Those interested in becoming partners should send an email to the TFA Secretariat demonstrating their support for the TFA 2020 mission, goal and objectives; have active involvement in programs and initiatives to end commodity driven tropical deforestation; and are commitment to sharing knowledge and expertise with other Partners. Please also include an email address and telephone number for a primary point of contact. Letters of interest should be submitted to the Secretariat by email to shawnwalker@merid.org.

**TFA 2020 Website:** <http://www.tfa2020.com/>

## Bonn Challenge on Forests, Climate Change and Biodiversity (Bonn Challenge)

The Bonn Challenge is the largest restoration initiative in history, catalyzed by a core commitment to restore 150 million hectares of degraded and deforested land globally by 2020. It was launched in September 2011 at a ministerial conference in Germany and, if achieved, will be worth an estimated US\$85 billion to the global economy per year. It will also sequester one billion metric tons of carbon dioxide equivalent annually. To date, more than 20 million hectares of land have been pledged for restoration by various countries, with another 30 million hectares identified for possible pledges in 2014. This challenge serves as a vehicle to implement various international agreements such as the Rio+20 land degradation target and the Aichi Target 15 of the Convention on Biological Diversity. The Bonn Challenge is supported by the Global Partnership on Forest Landscape Restoration (GPFLR), and the International Union for the Conservation of Nature (IUCN) serves as the secretariat.

**Objective:** Restore 150 million hectares of degraded and deforested land globally by 2020.

**Constituency:** Governments, private sector, individuals

**Participation:** Pledges to the Bonn Challenge are subject to a voluntary peer review by GPFLR members who may suggest modifications to the proposal. The pledges are registered and publicized on the GPFLR website and will be periodically monitored over the course of the Bonn Challenge.

**Resource Provision:** GPFLR responds to requests from individual countries for analysis, restoration assessment, and monitoring.

**Current Activities:** Accepting new pledges towards the target objective.

**Current Regional Participation:** Brazil, Costa Rica, El Salvador, United States of America

**How to Collaborate:** Email [flr@iucn.org](mailto:flr@iucn.org) or [carole.saint-laurent@iucn.org](mailto:carole.saint-laurent@iucn.org) for more information.

**Website:** <http://www.forestlandscape restoration.org/topic/bonn-challenge>

### Twenty by Twenty Initiative (20x20)

It is now estimated that up to 200 million hectares of land are already degraded in LAC, which has led to a decline in the productive capacity of the land, loss of biodiversity, contributed to emissions of GHG and climate pollutants, and increased vulnerability to climate and other human-induced impacts. The majority of greenhouse gas emissions in the region are generated from land use, land use change, and forestry. LAC saw an additional 31 million hectares placed into agriculture between 2001 and 2011 (FAOSTAT, December 2013). The substantial increase came at the expense of a reduction of natural and cultivated pastures as well as an increase in deforestation. On the other hand, land-use activities play a key role in the economy and social fabric of LAC, contributing 5% of the region's gross domestic product in 2012, accounting for 14% of employment during the period from 2008-2011 and 23% of the region's exports.

To respond to the challenges described above and contribute to the Bonn Challenge, the Latin America and Caribbean-specific 20x20 Initiative seeks to obtain pledges to restore degraded lands into agricultural productivity, contributing to national, regional and global climate change adaptation, mitigation and global food security. Governments in the region, with the

support of the World Resources Institute (WRI), the International Center for Tropical Agriculture (CIAT), and the Tropical Agriculture Research and Training Center (CATIE), in coordination with regional development Banks, will lead this initiative.

**Objective:** Contribute to global climate change mitigation, food security and land-restoration efforts, and support the Bonn Challenge through a commitment to effectively identify and target 20 million hectares of degraded land for recovery in the Latin America and the Caribbean region by 2020.

**Constituency:** Governments, private sector, individuals

**Participation:** Voluntary and non-binding

**Resource Provision:** None

**Current Activities:** The 20x20 Initiative will be launched in December 2014 at the COP20 in Lima. The goal is to have commitments from several countries in place by then as well as the confirmed availability of financial support from impact investment funds and other sources of finance.

**How to Collaborate:** Send an email expressing interest to Walter Vergara at [wvergara@wri.org](mailto:wvergara@wri.org).





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