



RESEARCH PROGRAM ON  
**Climate Change,  
Agriculture and  
Food Security**



**RPL Latin America  
2013 technical report**

## 1. Activity Reporting

### Activity 508-2013 (Milestone 4.2.1 2013 (1).)

**Title:** Baseline survey data for Latin American Region

**Status: Incomplete.** The baseline surveys were not done because the sites for Latin America were not chosen yet. Instead the following activities were developed by the regional program:

- Linkages with national and regional institutions, as well as global partners in order to engage new collaborations and enhance current ones to develop activities and strengthen capacity in terms of facing climate change and variability impacts in agriculture and food security, and using tools, methods, approaches for planning, policy formulation and decision making process. The purpose of this activity was to get to know CCAFS in the region as a facilitator of regional initiatives towards facing changes in climate in the agricultural sector as a way to achieve food security for region's population. Also in this context, show the capacity and scientific knowledge that can be provided to enhance their capacity of response and planning. As a result of these interactions, partnerships with institutions such as CAC, IICA, CATIE, IRI, Zamorano and UCI were achieved, as well as activities were developed with institutions such as FAO, UNEP, Fundacion Torcuato di Tella and USAID. The activities in which CCAFS-LAM were involved whether as organizer, financer or participating directly or through a representative from any country of the region were as follows (more detailed description is on summary by outputs and deliverables (if any) sections):

- Workshop on priority setting for climate-informed agriculture in Central America.
- Workshop on “Major achievements of CIAT-MADR agreement and experience from Senegal in Colombia”.
- Workshop on 'Tools for Adaptation and Mitigation of Climate Change in Agriculture in Central America.
- Workshop on developing a methodology for communicating climate information at scale to farmer communities.
- Webinars on: 1. Seasonal forecasting on June 19th with agricultural and meteorological institutions of CAC countries. 2. Adaptation and Mitigation Synergies in agriculture. 3. Tools and Approaches related to mitigation measurement used in the agricultural sector in Latin America. 4. Introduction to NAMAs and state of art of those processes in the region. 5. NAMAs in LAM's agricultural sector: relevance for the sector and experiences in the region.
- Annual Meeting for SAMPLES (Standard Assessment of Mitigation Potential and Livelihoods in Smallholder Systems).
- Workshop on National Adaptation Planning processes.

□ Elaboration of Latin America diagnostic and CCAFS LAM strategy The approach for the regional program to develop its strategy was to do an exhaustive diagnostic of the region, with the purpose of mapping key actors both in the public and private sector, as well as academy and multilateral organizations; identifying ongoing processes within the governments and at the regional level; determining outstanding approaches that are being developed in the region in terms of climate change and agriculture; characterizing the countries in terms of

vulnerability, socioeconomic environment, political stability, agro-ecosystems, main crops, food security, as well as population and environmental aspects.

☐ Develop climate change relevant indicators and vulnerability analysis for CCAFS Latin American countries in Latin America

- This activity was developed by CATIE, a partner based in Costa Rica. The vulnerability analysis was developed under two approaches one on the agricultural sector and water resources at national level in Central American countries, Colombia and Acre area of Brazil. The analysis was based on IPCC's conceptual proposal and the experience of the vulnerability analysis team at different work scales and scopes in Latin America.

☐ Remote Sensing Land Use Change Analysis to Estimate Adoption of the Quesungual Agroforestry System in Honduras and Nicaragua

- The objective of this activity is to identify the land cover changes that occurred between 1993 until 2013 using the best available Landsat and MODIS images. A preliminary review shows potential images for the years 1993, 1998, 2003 for earlier Landsat missions and for the years 2012 and 2013 for Landsat 8 data in the landscape of Lempira and Somotillo, and surrounding areas where QSMAS has been disseminated. The activity started late last year and it is expected to have the results by mid 2014.- Elaboration of documents on the state of art of research on climate change, agriculture and food security in Central American countries (Belice, Costa Rica, Honduras, El Salvador, Guatemala, Nicaragua, Panamá and Dominican Republic). These documents were elaborated jointly with the ministries of agriculture based on interviews to partners relevant in these topics in each country. All the documents are finished in the proces of publication, some of them are going to be published by the Ministry itself, that is the case of Guatemala.

#### **Gender component:**

The base line survey will try to integrate questions that let us characterize gender in the region. In order to enhance capacity in the region in terms of gender, five representatives from Nicaragua, Costa Rica, Colombia and Peru were trained in the Gender Training and Strategizing Workshop held in Nairobi, Kenya and organized by Theme 4. Result of this training workshop the Latin American team of representatives initiated internal discussions on activity plans to address gender from each of their institutions.

#### **Deliverables:**

- Reports

The baseline surveys are going to be done during 2014.

- Journal article

The baseline surveys are going to be done during 2014.

- All materials publicly available

The baseline surveys are going to be done during 2014.

#### **Partners:**

IICA; CATIE; IRI; FESCO

#### **Locations:**

Latin America (LAM)

## **Activity 510-2013 (Milestone 4.1.1 2013.)**

**Title:** Socioeconomic Scenarios for Latin America, subregion Central America.

**Status: Partially complete.** The socioeconomic scenarios for LAM region, which started on July 2013, are being developed not only for Central America but also for Andean countries in parallel processes. The workshops with the respective sub-regional representatives have been done, as well as, the reports related to the workshops. The modelling is being currently developed based on the results of the workshops, as well as ongoing partnerships to support the elaboration of national scenarios based on interests by national partners. An online MatLab program, as well as, a manual are being developed in order to provide access to all the participants and involve them in the whole process. Once the information online is available, the participants will have the opportunity to share their experiences through an online discussion group. The socioeconomic scenarios for Central America will be done in June 2014 and the scenarios for Andean countries will be done by the end of the year, because these are being developed jointly with UNEP-WCMC. In the context of the workshops, 49 impact pathways have been identified by participants in the two regions to guide policies, investments and institutional change, and also as a result the workshops help CCAFS LAM connect to stakeholders, get an understanding of their perspectives of what the relevant scope of issues is, and suggest pathways for collaboration.

### **Gender component:**

#### **Deliverables:**

- Research papers about the regional process: paper on process, paper on scenarios content, papers on policy engagement processes.

Reports on the process and results from the workshops for socioeconomic scenarios development are done.

- Regional workshops for scenarios development

Both Central American and Andean countries workshops were developed in Costa Rica and Colombia respectively. We had approximately 30 representatives from public and private institutions from all targeted countries.

- Workshops for scenarios use in policy planning and investment guidance funded by outside partners

There are going to be two workshops, one in Central America and one in Peru. The first one is going to be developed by the Regional Association of Maize producers in Nicaragua and the second one will be led by CIFOR at sub-national level, in the context of GCS Module 4b (Multilevel Governance and Carbon Management at the Landscape Scale) using CCAFS methodology.

#### **Partners:**

UCI; SAG; UNEP WCMC

#### **Locations:**

Other, Latin America (LAM)

## 2. Succinct summary of activities and deliverables by Output level

### Output: 1.1.2

#### Summary:

Workshop on “Major achievements of CIAT-MADR agreement and experience from Senegal in Colombia”, which will take place in Manizales, Colombia on November 25th. Walter Baeghten, Director of the Regional and Sectorial Research Program and leader of the Latin America and the Caribbean program in IRI, Columbia University and Ousmane Ndiaye, Head of Climate and Society of the Senegal National Meteorological Agency will attend as special invitees. This activity was developed jointly with Theme 1, CIAT and CCAFS LAM in order to present the successful alliance to work towards a Colombia agricultural sector resilient to climate change. Representatives from different regions of Colombia were able to know the scope of the MADR-CIAT agreement, as well as its main advances. Representatives from Honduras, Guatemala and Costa Rica from the Central American Council (CAC) attended to the workshop in order to know Colombian experience in working with public and private institutions and research centers. As a result of this experience, the Ministry of Honduras is going to replicate this initiative and the proposal has already been approved by the Minister. During 2014, there will be meetings with Colombian government, gremios and involved institutions in order to receive feedback and recommendations. CCAFS LAM made possible the participation of a representative from the Ministry of Agriculture of in the Involvement and participation of representatives from the Ministry of Agriculture and Environment in workshop on National Adaptation Planning organized by Theme 1. CSA prioritization tool: CCAFS LAM has supported Theme 1 in the design and elaboration of the prioritization tool, which main objective is to provide decision-makers with a tool in which it is possible to allocate investments to those best bet alternatives in terms of climate smart agriculture, considering context-specific characteristics. There was a pilot developed with Colombian case and during 2014 three (3) countries will be piloted including one in Central America.

### Output: 2.3.1

#### Summary:

Workshop on “Major achievements of CIAT-MADR agreement and experience from Senegal in Colombia”, which will take place in Manizales, Colombia on November 25th. Walter Baeghten, Director of the Regional and Sectorial Research Program and leader of the Latin America and the Caribbean program in IRI, Columbia University and Ousmane Ndiaye, Head of Climate and Society of the Senegal National Meteorological Agency will attend as special invitees. This activity was developed jointly with Theme 1, CIAT and CCAFS LAM in order to present the successful alliance to work towards a Colombia agricultural sector resilient to climate change. Representatives from different regions of Colombia were able to know the scope of the MADR-CIAT agreement, as well as its main advances. Representatives from Honduras, Guatemala and Costa Rica from the Central American Council (CAC) attended to the workshop in order to know Colombian experience in working with public and private institutions and research centers. As a result of this experience, the Ministry of Honduras is going to replicate this initiative and the proposal has already been approved by the Minister. During 2014, there will be meetings with Colombian government, gremios and involved institutions in order to receive feedback and recommendations. CCAFS LAM made possible the participation of a representative from the Ministry of

Agriculture of in the Involvement and participation of representatives from the Ministry of Agriculture and Environment in workshop on National Adaptation Planning organized by Theme 1. CSA prioritization tool: CCAFS LAM has supported Theme 1 in the design and elaboration of the prioritization tool, which main objective is to provide decision-makers with a tool in which it is possible to allocate investments to those best bet alternatives in terms of climate smart agriculture, considering context-specific characteristics. There was a pilot developed with Colombian case and during 2014 three (3) countries will be piloted including one in Central America.

**Output: 3.1.2**

**Summary:**

Webinars related to mitigation were developed jointly with Theme 3, UNEP, Fundación Torcuato di Tella, and the Central American Agriculture Council. The webinars had the participation of experienced scientist such as Aracely Castro (CIAT), Laura Meza (FAO), Peter Laderach (CIAT), Mariana Rufino (CIFOR) among others. In average attendees to the workshops were about 40 to 50 individuals. The webinars developed were as follows:

Webinar on Adaptation and Mitigation Synergies in agriculture. Webinar on Tools and Approaches related to mitigation measurement used in the agricultural sector in Latin America. Webinar on Introduction and state of art on NAMAs in the region Webinar on NAMAs in LAM's agricultural sector: relevance for the sector and experiences in the region. CCAFS LAM made possible the participation of a representative from the Ministry of Agriculture of in the Annual Meeting for SAMPLES (Standard Assessment of Mitigation Potential and Livelihoods in Smallholder Systems) at Kisumu, Kenya.

**Output: 3.3.1**

**Summary:**

The activity related to Remote Sensing Land Use Change Analysis To Estimate Adoption Of The Quesungual Agroforestry System In Honduras And Nicaragua has the objective to identify the land cover changes that occurred between 1993 until 2013 using the best available Landsat and MODIS images. A preliminary review shows potential images for the years 1993, 1998, 2003 for earlier Landsat missions and for the years 2012 and 2013 for Landsat 8 data in the landscape of Lempira and Somotillo, and surrounding areas where QSMAS has been disseminated. This activity was started at the end of 2013 and the products expected from this activity are the data collection and database generation using global positioning systems and an article for publication in an international journal.

**Output: 4.1.1**

**Summary:**

Socioeconomic scenarios were developed for Central America and Andean countries with key partners such as UCI (leading both processes) and UNEP-WCMC (partner in Andean countries workshop), in which we had the participation of representatives from public and private institutions, both national and regional, as well as, academy, NGOs and some multilateral organizations such as FAO. The workshops made possible the identification of a number of impact pathways by participants in the two regions to guide policies, investments

and institutional change. The workshops also provided the opportunity to strengthen CCAFS LAM relations with key stakeholders in the region.

**Output: 4.2.1**

**Summary:**

Related to the activity of the elaboration of socioeconomic scenarios for Latin America: Workshops to develop socioeconomic scenarios in both Central America and Andean Countries UCI (2013). Workshop report: Developing a methodology to communicate climate services for farmers at scale: CCAFS workshop, Nairobi, Kenya, 12-14 June 2013. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Additional to the purpose of the workshop to develop scenarios to test policies and practices in the agricultural sector, one of the main results was that the workshops allowed representatives from different countries to discuss about their differences and similarities in terms of the impact of climate change in their agricultural sector. Also, they had the opportunity to share how their countries handle those impacts in terms of policies, programs, extension mechanisms, among others. At the end of each workshop, each country had the opportunity to present the possible initiatives or activities that the socioeconomic scenarios would be applied, as well as other processes that CCAFS could support. These ideas are being followed up by the regional program. Related to activity on vulnerability analysis: The outputs from this activity were the report on Vulnerability analysis, databases, maps and indicators, as well as a policy brief including the results from the vulnerability analysis and indicators that is going to be published in 2014.

### 3. Publications

#### Publication #1

**Type:** Other

**CCAFS Themes:** Theme 4.2

**Citation:** Bouroncle C, Imbach P, Läderach P, Rodríguez B, Martínez A, Medellín C. 2013. Desarrollo de indicadores de cambio climático relevantes y análisis de vulnerabilidad para los países prioritarios para el Programa de Investigación en Cambio Climático, Agricultura y Seguridad Alimentaria en América Latina. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), San José, Costa Rica y Cali, Colombia.



## 4. Communications

### Media campaigns:

Engaging with local journalists in Costa Rica and Colombia achieving that CCAFS Latin America's work gets featured in regional media outlets. The goal is to reach all the prioritized countries.

### Blogs:

42 blogs were published during 2013

- Reduciendo la brecha entre los pronosticadores del clima y las comunidades campesinas
- Opportunity to improve livelihoods for smallholders in Guatemala
- Sharing the tools that could help Central America battle climate change
- Generando una consciencia frente al cambio climático a través del intercambio de experiencias
- Construyendo juntos una estrategia de cambio climático para América Latina
- Better together when building a climate change strategy for Latin America
- Climate change and agriculture in Central America: core challenges
- Una guía para el futuro del planeta: ¿Cómo afectará la seguridad alimentaria el cambio climático?
- Clima, ambiente y sociedad integrados para construir territorios resilientes (Wallace)
- Inyectando conciencia de género en innovaciones agrícolas climáticamente inteligentes
- Bosques tropicales pantanosos de turba: ¿cómo afecta el cambio de uso de la tierra las emisiones de metano y carbono?
- Lower Emissions in Latin American agriculture: can we reach that goal?
- ¿Es posible reducir las emisiones en la agricultura, a la vez que se mantienen los rendimientos?
- Menores emisiones en la agricultura de América Latina: ¿Podemos lograrlo?
- Desafiando suposiciones de género en la agricultura y la investigación sobre el cambio climático
- Investigación con perspectiva de género en Colombia: una historia mejor contada con fotos
- 'NAPear': Un negocio serio
- Afrontar el reto inminente: alimentar a una población cada vez mayor a la vez que protegemos nuestros bosques
- Compartiendo con Guatemala las lecciones aprendidas en adaptación al cambio climático y seguridad alimentaria
- ¿Pueden los países financiar la adaptación al clima, sin socavar el desarrollo?
- Soluciones combinadas para fortalecer la adaptación
- Combined solutions to strengthen adaptation
- Is it possible to promote investments in complex landscapes?
- ¿Es posible promover inversión en paisajes complejos?
- Las dos caras del fique
- Hablando globalmente, actuando localmente
- The two faces of fique
- 'Hananta Yuyaspa': Un nuevo amanecer para los países andinos
- Hananta Yuyaspa - a new day and start - for the Andean countries
- Productores colombianos tendrán las herramientas para enfrentar el cambio climático
- Jorge Daza's marvellous biogas machine

- Escenarios futuros para la seguridad alimentaria en Centroamérica
- El verdadero poder de la agricultura y la investigación climática
- Nuevo kit de herramientas sobre la agricultura climáticamente inteligente puede ayudar a tomar mejores decisiones
- Escalando la agricultura climáticamente inteligente: ¿qué podemos aprender unos de otros?

#### Websites:

- Translation of CCAFS Website to Spanish
- Increase of website visits up to 36.44% from South America region and 28.10% visits from Central America region
- 41.76% of new visits from South America and 30.79% from Central America (people who had never visited our site before)

#### Social media campaigns:

- 654 tweets
- 144 followers
- +450 interactions
- Participation in campaigns #GLFCOP19 / #CGIARMilestone / #BigFacts / #Ag4Dev / #WCA2014

#### Newsletters:

- +340 subscribers
- 4 Newsletters sent
- 29% Open rate (21.6 Industry avg)
- 8.8% Click rate (3.0% Industry avg)

#### Events:

Webinar on seasonal forecasting (June 19th)

Workshop on priority setting for climate-informed agriculture in Central America (July 18)

Workshop: Building CCAFS Strategy for Latin America (September 11)

Webinar: Synergies between Adaptation and Mitigation in Agriculture (September 17)

Workshop on “Major achievements of CIAT-MADR agreement and experience from Senegal in Colombia” (November 25)

Workshop for building socioeconomic scenarios in Andean countries (Bolivia, Colombia, Ecuador y Peru) (November 27)

Workshop for building socioeconomic scenarios in Central America (December 5)

Webinar on Tools and Approaches related to mitigation measurement used in the agricultural sector in Latin America (October 15)

Webinar on Introduction and state of art on NAMAs in the region (November 12)

Webinar on NAMAs in LAM's agricultural sector: relevance for the sector and experiences in the region. (November 26)

### Videos and other multimedia:

- Two videos of CCAFS projects in post-production process

### Other communications and outreach:

- América Latina tendrá estrategia en cambio climático, agricultura y seguridad alimentaria
- La maravillosa máquina de Jorge Daza
- Las dos caras del fique
- ¿En qué debe trabajar Centroamérica hacia 2050? Flickr photo sets
- Workshop on CCAFS Strategy for Latin America
- VII Wallace Conference, CATIE
- Beans in Honduras
- Workshop Socio-economic Scenarios for the Andean region
- Workshop Socio-economic Scenarios for Central America
- Agroforestry research project: Waslala, Nicaragua

## 5. Case studies

### Case Study 1

**Title:** Capacity enhancement to Ministries of Agriculture through the Central American Agricultural Council (CAC) towards a resilient agricultural sector in Central America to climate variability.

**Author:** Deissy Martínez Barón

**Type:** Capacity enhancement

#### Project description:

Impacts of climate change and variability in Latin America and particularly in Central America have increasingly been affecting the agricultural sector of this part of the region. Conditions such as poverty, food insecurity, low income, lack of government presence, among others increase the impact of climate extreme events such as droughts and floods. Policies often are not developed considering scientific knowledge and most of the times are not successfully implemented. Central America has a strong regional institution that gathers governments from all countries of the sub-region, and inside this institution is the Central American Agricultural Council (CAC) which gathers all ministries of agriculture. Through the alliance made among CAC, CCAFS – LAM and CIAT, the collaboration and support to the ministries has been significant, in terms of strengthening linkages with the Climate Change Coordination Units of each Ministry. In the case of Honduras, in 2013 our key contact from the Ministry of Agriculture presented the initiative of the MADR-CIAT agreement in Colombia to his Minister and it was approved to replicate the experience during 2014, this was encouraged through the participation of the Workshop on Climate and agricultural sector, held in Manizales, Colombia in which the advances of the agreement were presented to our central American delegation including Honduras. Currently, CCAFS LAM is supporting the Ministry in developing a similar initiative in Honduras.

#### Introduction / objectives:

- To enhance Ministries of Agriculture and support them through the alliance with CAC in terms of developing experiences that will build capacity to their agricultural sector.
- To support CAC in the development of initiatives from each ministry as a result of the south-south exchange made within the region.

#### Project results:

- Consolidation of a long term jointly agenda with CAC, CCAFS-LAM and CIAT through which activities related to strengthening capacity were developed, such as workshops, webinars, trainings.
- The approval by the Ministry of Agriculture of Honduras to develop an initiative similar to the MADR-CIAT agreement in Colombia which is being supported by the regional program.
- Support the Ministry of Agriculture of Honduras in developing the initiative according to their context –specific characteristics.

### Partners:

- Central American Agricultural Council (CAC)- CIAT- Ministry of Agriculture of Honduras

### Links/sources for further information:

- CAC – CIAT agreement: In the framework of this agreement all the activities among CCAFS and CAC have been developed. <http://www.sica.int/consulta/documento.aspx?idn=76312&idm=1>
- Report of CAC to the Council of Ministries where all the activities devel

## Case Study 2

**Title:** Sharing CCAFS Latin America outputs with regional networks and media

**Author:** José Luis Urrea

**Type:** Successful communications

### Project description:

One of the functions of the communications area for CCAFS LAM is to Engage with local journalists, to ensure that CCAFS Latin America work gets featured in regional media outlets. Therefore, we are looking for getting closer to the media at different levels and countries. A couple of experiences have been happening in the last months, like the Strategy Workshop in September, and Scenarios Workshop in December. Both of them were featured in local media. Also, ongoing research from CCAFS was looking for what farmers in Colombia can do - and are doing - to adapt to the effects of climate change while being mindful of mitigation. Also, they are looking for sources of vulnerability to climate change impacts and barriers to the adoption of climate-smart agriculture. Four stories came up from this research. These stories are worth to be shared, so the purpose was to disseminate in a national-wide media, both to start to create a media network for the regional program and extend the outreach of their research. Of this set of stories, two of them were published in the last year in El Espectador, one of the most important and influential newspapers in Colombia.

### Introduction / objectives:

- Disseminate the ongoing research, to aware public of the situation of smallholder farmers and learn more about mitigation and adaptation to climate change
- Engage journalists and build a network with national and regional media, to strength the impact of the content created in CCAFS LAM

### Project results:

- Media outreach of the Strategy Workshop and Scenarios Workshop
- Publication of stories from the work in Colombia

- Start to growing the network of the media partners in the region

**Partners:**

- Inter-American Institute for Cooperation in Agriculture (IICA)-
- Universidad para la Cooperación Internacional (UCI)
- Periódico El Espectador

**Links/sources for further information:**

- <http://www.costaricaon.com/noticias/ultima-hora/15292-america-latina-tendra-estrategia-en-cambio-climatico-agricultura-y-seguridad-alimentaria.html>
- <http://revistamyt.com/2013/12/en-que-debe-trabajar-la-centroamerica-hacia-2050/>
- <http://www.elespectador.com/noticias/medio-ambiente/maravillosa-maquina-de-jorge-daza-articulo-451547>
- <http://www.elespectador.com/noticias/actualidad/vivir/dos-caras-del-fique-articulo-460946>

## 6. Outcome indicators

### Outcome indicator #

#### Outcome indicator:

Integrated adaptation strategies for agricultural and food systems inserted into policy and institutional frameworks at regional, national or sub-national level in 2 target regions. Policy makers and key stakeholders use CCAFS research outputs - guidelines, tools and methods--- to support the development of NAPAS, sector specific adaptation plans, or germplasm benefit sharing policies.

#### Achievements:

Alliance with Central American Agricultural Council in order to build capacity in the decision making process and policy formulation. Establishment of joint agendas with Honduras and Guatemala Ministries of Agriculture to develop specific activities in each country. Elaboration of the state of arte in terms of research on climate change, agriculture and food security in all central american countries.

#### Evidence:

CAC's annual report where the activities developed during 2013 are summerized. Bilateral agenda with Guatemala and Honduras Ministry of Agriculture Documents on the state of arte on research on climate change, agriculture and food security

### Outcome indicator #

#### Outcome indicator:

National meteorological services and regional climate centers trained and equipped to produce downscaled seasonal forecast products for rural communities in two countries in each of three regions

#### Achievements:

Activitites developed in the context of the Ministry of Agriculture of Colombia and CIAT to achive the inclusion of seasonal forecast in the decision making process of farmer's associations (gremios), as well as the exchange of the experience from the advances of the agreement with central american countries and as a result Honduras is going to develop a similar initiative within the country.

#### Evidence:

Workshop developed to show advances in the agreement, participation of central american delegates. Approval by the Ministry of Agriculture od Honduras to develop a similar activity.

## 7. Leveraged funds

### Leveraged fund #1

**Title:**

Funds for the workshop on priority setting for climate-informed agriculture in Central America developed jointly with Zamorano University, IRI and USAID.

**Partner name:** USAID

**Budget:** \$50000

**Theme:** T2



## 8. Synthesis report

### Provide a synthesis of research activities at CCAFS sites

The CCAFS sites in Latin America were not chosen during 2013, therefore no work has been done in those specific sites, and although there has been important work in CCAFS prioritized countries in the region (See below).

### Provide a synthesis of cross-center activities

Several activities were developed by the centers in Latin America. Case studies has been developed by Bioversity related to impact of climate change on crops/production systems, testing the ability to identify potentially useful germplasm using climate change and crop adaption modelling and international germplasm information systems in Guatemala and Costa Rica. Local climate change vulnerability assessment and adaptation planning has been made for Colombian case. Resilient seed systems: tools and techniques for climate change adaptation in Costa Rica and Guatemala. At policy level, Bioversity developed together with regional and national partners the Strategic Action Plan to strengthen conservation and use of Mesoamerican Plant genetic resources in adapting agriculture to climate change (SAPM), the regional program is supporting this initiative since its presentation in Panamá on December 2013. Bioversity developed in the region was Farmers become citizen scientists for climate adaptation in Honduras, though which the farmers are part of the scientific process of testing the improved seeds. There has been a lot of work from colleagues from CIAT developing activities in Latin America, especially in Colombia and Central American countries, such as Brachiaria grasses and tropical forage legumes tolerant to drought or waterlogging integrated into production systems Colombia, Nicaragua and Panama to improve adaptation to climate change; detailed sector level adaptation plans co-developed with national actors in Colombia, including livestock, water and biodiversity; yield predictions of rice, cassava, beans, maize and potato in a regional scale considering uncertainties under different scenarios of climate change (Colombia); assessing CC impact and building a vulnerability index to agriculture sector in the Andean Region (Colombia, Ecuador y Peru) with focus on social, economic and environmental strategic locations, capacity building provided to institutions and actors; evaluation of climate security challenges in the Amazon through expert and policy review in 3 countries for food, energy, water and health security. Colombia, Peru, Brazil, Ecuador and Bolivia); guidelines for collecting data and build an evidence base regarding gender and adaptation to climate change (Colombia); design of climate and yield seasonal forecasting to climate risk management through the use of ETA climate regional model (Brazil and Colombia); Characterization of agricultural systems for seasonal forecasting (Colombia); inclusion of social and environmental costs and benefits to best-bets identified for reducing agricultural emissions (Colombia); economic analysis of implementing agroforestry (fruits trees-based) and silvopastoral systems to mitigate climate change in suitable areas (Colombia); testing the potential of tropical forage options to mitigate climate change through reducing nitrous oxide and methane emissions and enhancing carbon sequestration (Colombia); Trade-off analysis between mitigation, adaptation and farmers livelihoods in coffee systems (Central America); Calibration (and parameterisation when needed) of at least 3 process-based crop models (rice, cassava, beans) with regional varieties (Colombia and Brazil); evidence-based prioritization of CSA at the national level: Development of a tool and indicator set (Colombia); Remote Sensing Land Use Change Analysis to Estimate Adoption of the Quesungual Agroforestry System in Honduras and Nicaragua. In the Andean region CIP has been working on an expert System based on biological modeling and ancestral climate perception etnometeorological indicators developed and tested in Bolivia and modeling yield distribution as a function of climate variability and change, topography, and proxies for soil fertility in at least two CCAFS regions using joint multifractal distributions in the Andes area. Related to Low Emission Development Strategies (LEDS) in agriculture, IFPRI has been working on modeling approach and a set of interconnected tools (IMPACT-Land Use model-GIS) to map probable land use changes and effects on carbon stock and GHG emissions in Colombia.

## Provide a synthesis of regional engagement and communications activities

Regional program made successful alliances with Ministries of Agriculture through the Central Agricultural Council (CAC), in order to support activities in terms use of scientific knowledge in their policy formulation, as well as training activities in tools useful in their decision-making process. Particularly, significant work has been developed with Guatemala and Honduras in terms of developing specific agendas for each Ministry in collaboration with the regional program. The elaboration of documents on the state of art on research on climate change, agriculture and food security for each country (Honduras, Guatemala, Nicaragua, El Salvador, Costa Rica, Panamá, Dominican Republic, Belize) has been a great mechanism to strengthen linkages among the regional program with each ministry. The commitment among most of the ministries has been positive, even some of the Ministries will publish the document as one of their publications in 2014. Among the activities developed jointly with CAC, several webinars and workshops were made jointly with other partners such as UNEP, IICA, IRI and FAO to provide information to key people that influence decision-making process in the agricultural sector. One of the most positive workshops for the regional program was the one in which key stakeholders from the region participated in the discussion of the Regional Strategy Proposal, which provided important and relevant inputs to design the strategy, as well as, to know which are the main needs from the countries and how they would see the program in Latin America as a successful program which provide governments relevant information and guidance to make their agricultural sector resilient to climate change and variability based on what is already being developed in each country. Overall, CCAFS LAM supported 9 events to which representatives from the region were able to attend in different regions (SEA, WA, EA). The participation was approximately 65% from Central America and 35% from South America. The workshops and webinars developed are as follows:

- ▣ Workshops to develop socioeconomic scenarios in both Central America and Andean Countries
- ▣ UCI (2013). Workshop report: Developing a methodology to communicate climate services for farmers at scale: CCAFS workshop, Nairobi, Kenya, 12-14 June 2013. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
- ▣ Workshop on priority setting for climate-informed agriculture in Central America with the participation of meteorological services from the countries of the region, as well as representatives from agricultural ministries. Organized with IRI and Zamorano University and supported by USAID and CCAFS-LAM. Held in Honduras on July 18th, 2013.
- ▣ Workshop on “Major achievements of CIAT-MADR agreement and experience from Senegal in Colombia”, which will take place in Manizales, Colombia on November 25th. Walter Baeghten, Director of the Regional and Sectorial Research Program and leader of the Latin America and the Caribbean program in IRI, Columbia University and Ousmane Ndiaye, Head of Climate and Society of the Senegal National Meteorological Agency will attend as special invitees.
- ▣ Webinar on seasonal forecasting on June 19th with agricultural and meteorological institutions of CAC countries and other key partners (IICA, UNEP, IRI).
- ▣ Attendance of a representative from the Ministry of Agriculture of Honduras to the workshop on Developing a methodology for communicating climate information at scale to farmer communities in Nairobi, Kenya. Organized by CCAFS Theme 2.
- ▣ Webinar on Adaptation and Mitigation Synergies in agriculture. Organized jointly by CCAFS, UNEP, Fundación Torcuato di Tella, and the Central American Agriculture Council
- ▣ Webinar on Tools and Approaches related to mitigation measurement used in the agricultural sector in Latin America. Organized jointly by CCAFS, UNEP, Fundación Torcuato di Tella, and the Central American Agriculture Council.
- ▣ Webinar on Introduction and state of art on NAMAs in the region
- ▣ Webinar on NAMAs in LAM's agricultural sector: relevance for the sector and experiences in the region.

☒ A representative of the Ministry of Agriculture of Guatemala attended the Annual Meeting for SAMPLES (Standard Assessment of Mitigation Potential and Livelihoods in Smallholder Systems) at Kisumu, Kenya

☒ Participation of representatives from the Ministry of Agriculture and Environment in workshop on National Adaptation Planning organized by Theme 1. One of our main communication strategies is to publish at least a blog for every workshop to which the regional program was involved, attended, participated and/or financed. In this context, 42 blogs were published, some of the blogs related to Latin America written in English were translated into Spanish, in order to reach non-English speakers in the region. Every month a newsletter is sent to all contacts in LAM in order to update them on the activities that are being developed by the regional program and also on key events happening in the region.

### **Provide a synthesis of activities related to decision support systems and tools**

CCAFS LAM has been supporting Theme 1 and CIAT in the development of the prioritization tool providing regional information and analysis, as well as providing contacts from the countries in which pilots are being developed. Support in the workshop on 'Tools for Adaptation and Mitigation of Climate Change in Agriculture in Central America' organized by FAO and supported by the American Agricultural Council (CAC), in which CRAFT and analogous tools were presented and there was two-day training. CCAFS LAM developed the workshops to elaborate the socioeconomic scenarios for Andean countries and Central America, together with UNEP-WCMC, UCI and the CCAFS scenarios team. There were over 30 participants to each workshop from different countries in which not only the information to build the scenarios was collected but also new relations and discussions were raised among the participants in terms of sharing how climate change is impacting their countries, how the government is facing those impacts and how the institutional mechanisms are working in each country to make a more resilient agricultural sector.