

Title: [Center] (CIAT LAM) Relevant Climate Change Information meets Decision-Making to influence Policy and Institutions for Climate Resilient Food Systems

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Mar 2014	Dec 2017	F1	Thornton, Philip <p.thornton@cgiar.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2, Bilateral	On-going	CIAT - Centro Internacional de Agricultura Tropical - Colombia	Laderach, Peter <p.laderach@cgiar.org>

Project is working on

Flaship(s)
F1 (before F4 - Philip): Priorities and Policies for CSA
F3 (Lini): Low emissions development

Region(s)
LAM: Latin America

Project summary

Latin America is at a critical point in time where many governments and well-organized sectors are developing their mitigation and adaptation strategies. CCAFS supports these processes through the excellent partnerships and ongoing climate change research across Latin America, specifically in Costa Rica, Honduras, Colombia* and Peru*. The project works closely together with ministries and research centers to make sure that the latest climate science is being used for NAMAs and NAPs. This project has important opportunity to share and exchange knowledge and learning across LAM as it works in several countries on similar topics, whereas most of the stakeholders usually only interact within their own country. The platforms of interactions are through the NAMA and NAP development. * Efforts have been reduced due to facing out of partners and decreased budget.

2. Partners

Partner #1 (Leader)

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Laderach, Peter <p.laderach@cgiar.org>	Activity 2014-6 *Leader*. Activity 2014-392 *Leader*. Activity 2014-402 *Leader*. Activity 2014-403 *Leader*.	HQ
Partner	Twyman, Jennifer <j.twyman@cgiar.org>	Activity 2014-29 *Leader*.	HQ
Partner	Tapasco, Jeimar <j.tapasco@cgiar.org>	Activity 2014-31 *Leader*. Activity 2014-32 *Leader*.	HQ
Project Coordinator	Obando Bonilla, Diego <d.obando@cgiar.org>	Leads work in Honduras	HQ
Project Coordinator	Gumucio, Tatiana <T.Gumucio@CGIAR.ORG>	Leads gender work.	HQ

Partner #2

Institution: CIP - Centro Internacional de la Papa

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Quiroz, Roberto <r.quiroz@cgiar.org>	CIP leads the NAMA development activity in Peru: Promoting the development of a High Andes-oriented agricultural NAMA in Peru. CIP will also contribute overall to the NAMA discussion across the LAM region and help facilitate relations and interaction with the Peruvian government in respect to the COP in Peru. Activity 2014-30 *Leader*. Activity 2014-393 *Leader*.	HQ
Project Coordinator	Turin, Cecilia <c.turin@cgiar.org>	Activity 2014-29 *Partner*.	HQ

Partner #3**Institution:** BIOVERSITY - Bioversity International**Contact(s):**

Type	Contact	Responsibilities and contributions	Branch
Partner	van Etten, Jacob <j.vanetten@cgiar.org>	BI discontinues its activities in 2016.	HQ

Partner #4**Institution:** MAG - Ministerio de Agricultura**Contact(s):**

Type	Contact	Responsibilities and contributions	Branch
Partner	Gonzalez, Guillermo <ggonzalez-pdr@mag.go.cr>	Activity 2014-6 *Partner*.	HQ

Partner #5**Institution:** ICAFE - Instituto de Café de Costa Rica**Contact(s):**

Type	Contact	Responsibilities and contributions	Branch
Partner	Zamora, Luis <lzamora@mag.go.cr>	Activity 2014-6 *Partner*.	HQ

Partner #6

Institution: Ministerio del Ambiente

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Morales, Rosa <rmorales@minam.gob.pe>	Activity 2014-28 *Partner*.	HQ
Partner	Quijandria, Gabriel <gquijandria@minam.gob.pe>	Activity 2014-30 *Partner*.	HQ

Partner #7

Institution: Ministerio de Agricultura y Riego-Peru

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Sotomayor, Cesar <csotomayor@minagri.gob>	Activity 2014-30 *Partner*.	HQ

Partner #8

Institution: INIA - Instituto nacional de innovacion agraria

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Quijandria, Benjamin <bquijandria@inia.gob.pe>	Activity 2014-30 *Partner*.	HQ
Partner	Gonzales, Sonia <sgonzales@minam.gob.pe>	Activity 2014-30 *Partner*.	HQ

Partner #9

Institution: DNP - Departamento Nacional de Planeación

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Calderon, Silvia <scalderon@dnp.gov.co>	Activity 2014-31 *Partner*. Activity 2014-32 *Partner*.	HQ

Partner #10

Institution: MADR - Ministerio de Agricultura y Desarrollo Rural

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Hernandez, Nestor <nestor.hernandez@minagricultura.gov.co>	Activity 2014-31 *Partner*. Activity 2014-32 *Partner*.	HQ

Partner #11

Institution: ONF-Andina - Office National des Forets-Andina

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Castro, Augusto <acastro@onfandina.com>	ONF Andina has been faced out due to budget cuts in March 2015.	HQ

Partner #12

Institution: SAG - Secretaría de Agricultura y Ganadería de Honduras

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Duron, Marlon <marlon.duron@yahoo.es>	Coordinator, Agroenvironment Climate Change and Risk Management Unit in Agriculture and Livestock Secretary in Honduras	HQ
Partner	Del Cid, JosÃ© Miguel <josedel7@gmail.com>	Coordinator, Agroclimatic Participative Committees in Honduras	HQ
Partner	Espinoza, Tirza Suyapa <espinozasalinast@yahoo.es>	Tirza develops plans and strategies in climate change in SAG, support the Agroenvironment climate change Unit	HQ

Partner #13

Institution: IDEAM - Instituto de Hidrología, Meteorología y Estudios Ambientales de Colombia

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Ruiz, Jose Franklyn <jruiz@ideam.gov.co>	Franklyn coordinates the forecast officce in IDEAM Colombia	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	Again, shared positions in ministries are a very effective way of engagement and achieving research and outcome targets.

Partnerships overall over the last reporting period:

Besides CIAT there are no more CG partners left, which makes the project in a sense a bit more straight forward. The partnership is close to perfect due to the shared positions in the ministry, which essentially are ministry and also CIAT staff. Also the exchange between the activities across the countries and ministry is very valuable.

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Country			Costa Rica
Country			Colombia
Country			Peru

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:

Improved decisions towards more resilient food systems including gender issues are taken due to the project contribution to at least 3 NAMAs, 1 NAP and 1 sub-sector NAP.

Annual progress towards outcome (end of 2016*): Policy makers at subnational government level are knowledgeable about the scientific evidence on land use change and soil carbon stocks in the Andean highlands, their relation with GHG emissions, formulation of mitigation actions at local level and about the implications of land use change on gender and its relevance for development policies.(2014-30). MADR take more informed decisions based on relevant climate information regarding livestock NAMA development on relevant climate information (2014-31). Information and recommendation for potential adaptation measures based on climate science are shared and discussed with one regional government and farmer organizations (2014-32). 1-2 Ministries of Agriculture are taking gender policy briefs and/or publication into consideration in their climate change-related policymaking, particularly for NAPs and NAMAs (2014-29). NAMA coffee and livestock consortium and CCAFS have jointly developed NAMA implementation plans, developed funding proposals that have been submitted to donors for which initial or total funding has been secured for the NAMA implementation (2014-6).

Annual progress towards project outcome in the current reporting cycle (2016*): MINAGRI used the policy brief "Genero y Agricultura en el Peru" to draft its gender diagnostic (references attached) for the design and implementation of public policies on equality and inclusion in the sector. CIAT-CCAFS science helped to secure funding for the Coffee NAMA through NAMA-facilities (outcome 2015), the project is now tailoring climate science to guide its implementation. The tangible products developed this year are (i) revision of carbon assessment methodologies and factores; (ii) calculations of total carbon stock by regions (see deliverables). The Livestock NAMA failed to secure funding in 2015, CIAT-CCAFS supported a new detailed proposal. Meanwhile is a MAG funded pilot project being implemented to test assumptions, methodologies and MRV. CIAT-CCAFS supports by documenting the learning process, facilitating the policy dialogues and overall communications. Technical support is given by CIAT-CCAFS L+ project. In Honduras, the scenario analysis conducted lead to the addition of the "Information and articulation of research" pillar to the NAP and CIAT-CCAFS jointly with SAG developed a research proposal on climate and food security submitted to TNC to implement the pillar. Agroclimatic-Technical-Committees will start operating in 2017. Colombian agricultural sector adapts to climate variability with CIAT-CCAFS facilitated data collection, dissemination and science (outcome on MADR work). Lessons learned on policy incidence research are being leveraged in Asia through the establishment of a climate change policy hub which supports >10 countries' climate policies with bilateral funding of >1.5 MIO USD in 2017. High level report on Economic Advantage of NDCs presented at COP22 in collaboration with IFAD, building on previous ASAP support to design 100 MIO USD investment across 5 countries (outcome 2015). Seven peer-reviewed papers on climate change impact in CA, on coffee and livestock published in 2016. 1 MIO USD funding to support CA countries on climate policies secured from IFAD.

How communication and engagement activities have contributed to achieving your Project

outcomes:* We have collaborated with partners and colleagues at CIAT and CIP in Lima to publicize and distribute the policy brief. We have also blogged and communicated this and other policy briefs and publications on gender via the gender and climate change bulletin distributed to our listserve of decision-makers and practitioners in Latin America. We have managed to develop very direct and tight communication and collaboration channels through joint positions. In Costa Rica we have one position for each NAMA hired by MAG reporting to MAG/CIAT and in Honduras we have one seconded CIAT staff.

Evidence documents of progress towards outcomes:*

<https://marlo.cgiar.org/data/ccafs/projects//2/projectOutcome/minagri%20genero-comentarios%20Yovi%20ta.docx>

Annual progress towards outcome (end of 2015): Study on opportunities to include ?climate smart agriculture? in UNFCCC's negotiations agenda is prepared and shared with LAM negotiators and Presidencies of COP 20 and 21 (2014-28). Gender and climate change country profiles for Colombia, Peru, Honduras, Nicaragua, Costa Rica, El Salvador, and Guatemala completed and distributed to respective Ministries of Agriculture to inform more gender-equitable policy-making (2014-29). Information on the impact of land use changes on soil carbon stocks and how changes affect women agency capacities documented and discussed within the technical working group on climate change of MINAGRI. INIA incorporates the methods and tools developed by the Project as part of the new Climate Change program (2014-30). Barrier analysis to identify limitations for implementing NAMA conducted that increases knowledge in the respective institutions and policy makers to develop improved NAMA implementation plans (2014-31). Information and recommendation for potential adaptation measures based on climate science are shared and discussed with two regional governments and farmer organizations (2014-32). Government officials and private sector representatives are using methodologies and data acquired through trainings and interactions by CCAFS, which are relevant to NAMA design and implementation plans. Methodologies include MAC curves (Coffee NAMA), climate suitability modeling (Coffee NAMA) and improved pasture management (Livestock NAMA). The Costa Rican government has approved the Livestock and Coffee NAMA (2014-6). Planning processes and related information needs in the Ministry of Agriculture of Guatemala (MAGA) characterized (2014-26). Information services and gaps in government planning and decision-making in Central America characterized (2014-27).

Annual progress towards outcome (end of 2017): Policy makers at subnational government level and key local stakeholders are knowledgeable about the CSA practices for the high Andes to avoid the increase of GHG emissions and the restoration of ecosystem services. Likewise they are aware of the importance to include gender approach in their adaptation and mitigation plans. CIP/UF/INIA convene a workshop on scenario analyses with MINAGRI and MINAM to use the soil carbon dynamics model with collected data to assess the impact of CC on Land use changes and soil carbon economy/fluxes as well as to assess the impact of policies on incentive mechanisms to reduce carbon emission as an instrument to shape policy decisions (2014-30). CIAT/CCAFS supports the Ministry of Agriculture and LEDS Colombia with evidence based and relevant climate information to take more informed decisions and guide the livestock NAMA development (2014-31). Information and recommendation for potential adaptation measures based on climate science are shared and discussed with one regional government and farmer organizations (2014-32). 1-2 Ministries of Agriculture are using CIAT/CCAFS Policy Brief on gender and climate change policy recommendations in their climate change-related policy-making, and they engage on a regular basis with CIAT/CCAFS for consultative support to integrate gender into policies. 1 Ministry references the Policy Brief recommendations, gender policy briefs and/or publication in their adaptation plan or NAMA development (2014-29). NAMA coffee and livestock consortium and CCAFS have jointly developed NAMA implementation plans, developed funding proposals and funding has been secured for the NAMA implementation (2014-6).

Annual progress towards outcome (end of 2018): The subnational government has incorporated the scientific evidence on land use change and soil carbon stocks on their mitigation and adaptation plans for the Andean highlands agriculture and are considering validating CIP proposal for mitigation actions, CSA alternatives and gender. INIA soil scientists adopt the conceptual framework of CIP to study soil carbon stocks (2014-30). CCAFS/CIAT helps in the final development of the livestock NAMA and in the submission of funding proposals to implement a NAMA (2014-31). By the inclusion of regional recommendations it is assured that the Colombia NAP supports and is relevant for Colombia as a country including its regional perspectives (2014-32). Partners and key civil society organizations are using CCAFS methodology on influencing gender-inclusive climate change policy-making in their engagement with agricultural sector policymakers (2014-29). The NAMA consortium (private, public, donors and CCAFS) evaluates carbon sequestration potential and cost of practices being implemented in NAMAs using field data. Sugar cane NAMA is being approved and implemented with the support of CCAFS (2014-6)

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* Difficult to follow through long-term on outcomes due to turn-over in ministries; in the future, instead of focusing efforts specifically on ministries it might be more productive to identify those actors who are more permanently involved in policymaking processes and prioritize working with them (2014-30). Though the shared positions in Central America are we able to somewhat buffer the effects of changes in the administration, however progress always slows down when administrations change (2014-6).

4.2 CCAFS Outcomes

RP LAM Outcome 2019: National governments formulate and implement NAMAS and LEDS based on improved data on smallholder agricultural GHG emissions and implement equitable policies to strengthen linkages among environment and agriculture in order to avoid deforestation from commodity agriculture, promote restoration to increase carbon sequestration and reduce GHG emissions from livestock and commodities. Research organizations generate improved data on smallholder agricultural GHG emissions. Local governments contribute to the development of NAMAS and LEDS action plans at local level.

Indicator #1: # of low emissions plans developed that have significant mitigation potential for 2025, i.e. will contribute to at least 5% GHG reduction or reach at least 10,000 farmers, including at least 10% women.

2019
<p>Target value: 3</p> <p>Cumulative target to date: 11</p> <p>Target narrative: Coffee and livestock NAMA are fully designed, fully or partially funded and being implemented. Sugar cane NAMA is designed, approved and funding being secured (2014-6). CCAFS contributes to 2-3 gender inclusive national level policies (NAMA/NAP/other climate risk prevention/response protocols) (2014-28). Andean Agriculture NAMA will be formulated and discussed with and validated by stakeholders at national and subnational level (2014-30). Fruit and Livestock NAMA approved and partially or fully being funded and starting to be implemented (2014-31).</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2015

Target value: 2

Cumulative target to date: 5

Target narrative: Strong commitment (demonstrated by respective actions) of Costa Rican government to implement, fund and secure funding for the implementation of a coffee and livestock NAMA as part of the LEDS strategy (2014-6). Peruvian delegates participate in a workshop to discuss findings from the study on countries' positions in global climate negotiations and a publication based on outputs from discussions is prepared (additionally, a scientific publication is considered). 1 study on opportunities to include "climate smart agriculture" in UNFCCC's negotiation agenda is prepared and brief publications based on study's findings prepared (2014-28). Representatives from 4 ministries of agriculture participate in regional workshop on tools for integrating gender into climate change policy (2014-29). National partners participate in the elaboration of documents and benefit from training workshops (2014-30). Regional analyses of barriers inform relevant stakeholders and policy makers about NAMA readiness and feasibility (2014-31).

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 3

Cumulative target to date: 8

Target achieved: 2.0

Target narrative: CIP and government at subnational level working closely and reviewing the climate change adaptation and mitigations plans for the Andean highlands agriculture. National partners participate in the elaboration of evidence based documents and benefit from scientific seminar. (2014-30) Continued stakeholder engagement and climate science support allow policy makers to take decision based on information and recommendation from CIAT and increase the ownership of the livestock NAMA. Registration of the livestock NAMA to the United Nations Framework Convention on Climate Change. (2014-31). Costa Rican coffee NAMA implementation plan supported by climate evidence and Livestock NAMA secured financial support.

Narrative for your achieved targets, including evidence: In Costa Rica the coffee NAMA has been developed and funding secured. The project is now supporting its implementation, CO₂e reductions are estimated to be about 120,000 Ton. A consolidated Livestock NAMA proposal has been finalized and pilot projects are being implemented, emission reductions are estimated to be about 203,000 Ton CO₂e. In Honduras CCAFS supported the coffee NAMA committee to develop the baseline format (emission reduction being calculated). For the livestock NAMA we are supporting the design using ex-ante assessments and scenarios, emission reductions are estimated to be about 210,000 Ton CO₂e through silvopastoral systems.

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: CIAT/CCAFS has contributed gender inputs to the following draft policy document: the Climate Change Gender Action Plan of Peru. For development of Livestock NAMAs in Costa Rica and Colombia (Livestock Plus project), gender research needs were identified via a Working Paper on gender and livestock production in Latin America in 2016; also, funding was secured and a new staff member hired. The new staff has carried out preliminary gender-specific research in both sites.

The expected annual gender and social inclusion contribution to this CCAFS outcome: National partners knowledgeable about CIP gender evidence are making more informed decisions. (2014-30). CCAFS contributes input on gender incorporation for one policy (NAMA/NAP/other climate risk prevention/response protocols) draft (2014-29).

Major Output groups:

- F3 (Lini): Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

RP LAM Outcome 2019: National governments design and enact equitable food systems policies and strategies taking adaptation into consideration to support national and regional policy and global climate change negotiations. Private institutions develop and support implementation of NAPs and equivalent policies with their respective investment plans addressing climate challenges to increase food security and resilience to changes in climate.

Indicator #1: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

2019

Target value: 2

Cumulative target to date: 9

Target narrative: CCAFS contributes to 2-3 gender inclusive national level policies (NAMA/NAP/other climate risk prevention/response protocols) (2014-28). Regional perspectives discussed and agreed in four regions are used as bases for the development of the final version of the Colombia NAP. The processes increased the capacity of national authorities to create NAP with regional perspective (2014-32). In early 2017, Guatemala will fully adopt an information system to support policy decision-making (2014-26). Two other Central American countries will adopt a similar system in late 2017 (2014-27).

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2015

Target value: 4

Cumulative target to date: 6

Target narrative: Representatives from 4 ministries of agriculture participate in regional workshop on tools for integrating gender into climate change policy (2014-28). Strong regional stakeholder engagement allows sub-national authorities to increase their skills and knowledge about impacts of climate change and adaptation options 2014-32. In 2015, we will work towards an outcome by making an inventory of information needs and use at national level in Guatemala (2014-26) and Central American subregional level (2014-27) and have them validated by relevant decision makers.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 1

Cumulative target to date: 7

Target achieved: 1.0

Target narrative: Strong regional stake-holder engagement allows sub-national authorities to increase their skills and knowledge about impacts of climate change and adaptation options (2014-32).

Narrative for your achieved targets, including evidence: CIAT-CCAFS continues supporting Colombia on the formulation of regional and sectoral adaptation plans, the National System for Climate Change "SISCLIMA" was created. In Honduras CCAFS supported development of the National Adaptation Strategy ENACCSA and has included the strategic component called "Articulation and alliance with research networks and other sources that generate innovation, research, technology, information systems and knowledge". CIAT builds on its policy work to launch a climate policy hub in Asia and engages with >10 countries, providing specific climate science on CSA to influence climate policies. Initially this is being done through the CSA country profiles (see highlight).

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: CIAT/CCAFS has contributed gender inputs to the following draft policy documents: the Climate Change Gender Action Plan of Peru; the Honduras National Climate Change Adaptation Strategy for the Agri-Food Sector (2014-2024); the Roadmap for the Development of Adaptation Plans within the National Climate Change Adaptation Plan, of the National Planning Department of Colombia; Adaptation based in communities Methodological Guide, of Colombia's Ministry of Environment and Sustainable Development.

The expected annual gender and social inclusion contribution to this CCAFS outcome: CCAFS contributes input on gender incorporation for one policy (NAMA/NAP/other climate risk prevention/response protocols) draft (2014-29).

Indicator #2: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

2019

Target value: 0

Cumulative target to date: 1

Target narrative: Finalizes in 2015

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2015

Target value: 1

Cumulative target to date: 1

Target narrative: Peruvian delegates participate in a workshop to discuss findings from the study on countries' positions in global climate negotiations and a publication based on outputs from discussions is prepared (additionally, a scientific publication is considered). 1 study on opportunities to include "climate smart agriculture" in UNFCCC's negotiation agenda is prepared and brief publications based on study's findings prepared (2014-28).

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 0

Cumulative target to date: 1

Target achieved: 0.0

Target narrative: The project does not address this outcome anymore, due to Bioversity International discontinuing activities under this FP project.

Narrative for your achieved targets, including evidence: The project does not address this outcome anymore, due to Bioversity International discontinuing activities under this FP The project had achieved that the selected Central American countries submitted a joint statement on CSA to the COP21.

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: The project does not address this outcome anymore, due to Bioversity International discontinuing activities under this FP The project had achieved that the selected Central American countries submitted a joint statement on CSA to the COP21. 2

The expected annual gender and social inclusion contribution to this CCAFS outcome: The project does not address this outcome anymore, due to Bioversity International discontinuing activities under this FP project.

Major Output groups:

- F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues
- F1 (before F4 - Philip): Priority setting contextualised with national stakeholders and capacity strengthened to apply outputs in policy formulation; including trade-off analyses, foresight activities, and quantification of regional socio-economic scenarios
- F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:

<Not Defined>

Collaborating with other CRPs

Forests, Trees and Agroforestry

Description of collaboration: The work on coffee is in close collaboration with FTA. It is a informal collaboration between scientist manly Philippe Vaast at ICRAF/FTA who overseas the coffee and cocoa work. Also, coordination with CIFO and GGCA for Global Landscapes Forum Gender Pavillion, wherein policy briefs were disseminated.

Livestock and Fish

Description of collaboration: The NAMA livestock work is close collaboration with Livestock and Fish CRP, through CIAT's tropical forages program.

4.4 Case Studies

Case Study #136

Title: Colombian agricultural sector adapts to climate variability with CIAT-CCAFS facilitated data collection, dissemination and science

Year: 2016

Project(s): P42

Outcome Statement: CIAT-CCAFS agroclimatic prediction science has changed how agricultural sector organizations (e.g. farmer associations: Fedearroz, Fenalce; NARS: Corpoica; private research organizations: Cenicafé), generate and share climate variability adaptation recommendations. Through Technical Agroclimatic Committees (MTA), organizations from different agricultural sectors discuss, share, and integrate knowledge to tackle climate variability in MTA regions (Santander (new 2016), Cordoba, Sucre, Cauca, Magdalena, Eje Cafetero). National and Regional Agroclimatic Bulletins are produced using information generated in the MTAs. The bulletins democratized climate information in the country.

Research Outputs: CIAT-CCAFS developed underpinning science that enabled the widespread and sustained use of site-specific agro-climatic forecasts. Delerce et al. (2016) demonstrated that 30–50% of the rice yield variability can be explained by 3-4 climatic factors that can be managed with site-specific recommendations. Similarly, Esquivel et al. (in prep.) (also see <https://goo.gl/d8weKg> and <https://goo.gl/2KCPXo>) have demonstrated that forecast skill in Colombia is good enough to produce recommendations for various rice and maize regions. The effort included calibration and validation of rice, maize and bean models for Colombian conditions (Barrios, 2016). These findings and tools were co-developed with national stakeholders. CIAT-CCAFS scientists assessed information needs in Santander, Cordoba, Tolima, Valle del Cauca, and Meta (<https://cgspace.cgiar.org/rest/bitstreams/73612/retrieve>), which has been key for delivering user-tailored services and identifying and inviting MTA participants. For bean producers, agronomic practice manuals were produced based on CIAT-CCAFS science to accompany forecasts (<https://cgspace.cgiar.org/handle/10568/76299> and <https://cgspace.cgiar.org/handle/10568/76613>).

Research Partners: La Corporación Colombiana de Investigación Agropecuaria (Corpoica) IRI – Columbia University Centro de Investigación de la Caña de Azúcar (Cenicaña) Centro de Investigación de Café (Cenicafé)

Activities: CIAT-CCAFS drove the establishment of 6 Technical Agroclimatic Roundtables (MTA, Mesas Técnicas Agroclimáticas), including the most recent one in Santander. There is also a National-level MTA. Through the MTAs, local and national governments, farmers' associations (Fenalce, Fedearroz, FNC, Cenicaña) and other participating institutions (universities, Corpoica) have institutionalized CIAT-CCAFS climate information into their decision making. CIAT-CCAFS science and capacity building on crop modelling and seasonal climate prediction enabled national partners, notably Fedearroz and Fenalce, to analyze local conditions and produce and disseminate seasonal agro-climatic forecasts across maize and rice producing regions. MTA participants continue monthly meetings to share forecasts now produced by their own teams. For example, Fedearroz and Fenalce now have teams of 5 people producing, interpreting and delivering monthly forecasts. National and regional agroclimatic are issued on a regular basis. Further information can be found in Camacho (2016).

Non-Research Partneres: Federación Nacional de Cultivadores de Cereales y Leguminosas (Fenalce) Federación Nacional de Arroceros (FEDEARROZ) Federación Nacional de Cafeteros (FNC) Asociación de Bananeros del Magdalena (ASBAMA) Instituto de Hidrología, Meteorología y Estudios Ambientales (IDEAM) Ministerio de Agricultura de Colombia

Output Users: Next user –technicians and researcher’s farmer associations and gremios use agro-climatic prediction tools End users – Farmers of national federations and gremios. In long term, potentially more than 500 000 farmers.

Evidence Outcome: Validation report (uploaded): Outcome Harvesting Report: How Colombian Agriculture Producers in Various Sectors Benefit from National Agroclimatic Bulletins and Technical Agroclimatic Roundtables, By Kemly Camacho. 2016.

Output Used: Research outputs were used to build capacity in farmers’ organizations as well as in IDEAM. Regional MTAs operate sustainably to analyze the national bulletin and localized climate forecasts and agronomic recommendations. Within the MTAs, outputs from CIAT-CCAFS research are shared and relationships between regional actors (farmer associations/public/private institutions) are facilitated.

References Case: Camacho, K. 2016. Outcome Harvesting Report (uploaded) Barrios, C. 2016. MSc Thesis. Blundo, G. et al. 2016. <https://ccafs.cgiar.org/fr/node/52420#.WKhbBDKZNo4> Delerce, S. et al. 2016. PLoS One 11, e0161620. Esquivel, A. et al. in prep. Predictability of Colombian rainfall assessed by canonical correlation analysis. In preparation. CCAFS. 2015. <https://ccafs.cgiar.org/es/mesas-tecnicas-agroclimaticas#.WKXWAm8rJhE>

Primary 2019 outcome indicator(s):

- Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities
- Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)
- # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Link between outcome story and and the FP Outcome(s): The outcome is also jointly reported with CCAFS LAM (Ana Maria Loboguerrero)

Annex uploaded:

<https://marlo.cgiar.org/data/ccafs/projects//2/caseStudy/Caso%20BTA%2020170216%20Informe%20final.pdf>

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F1 (before F4 - Philip): Priority setting contextualised with national stakeholders and capacity strengthened to apply outputs in policy formulation; including trade-off analyses, foresight activities, and quantification of regional socio-economic scenarios

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F3 (Lini): Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Major Output groups - 2016

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

Project addresses a wide range of NAMAs and NAP's across three countries that are at different stages of implementation and benefit from the learning of each other. Livestock NAMA in Colombia benefits from Costa Rica, Coffee NAMA in Peru benefits from Costa Rica, etc. Scenario analysis is planned for Coffee NAMA.

Brief summary of your actual 2016 contribution towards the selected MOG: The three seconded/joint staff in Honduras and Costa Rica benefit from each other as the advances on the NAMAs. Coffee NAMA financed but not national strategy, Livestock national strategy but only pilot and Honduras only starting to develop Livestock NAMA. A new 1 MIO IFAD project will further facilitate collaboration.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: CCAFS contributes input on gender incorporation for one policy (NAMA/NAP/other climate risk prevention/response protocols) draft .

Summary of the gender and social inclusion dimension of the 2016 outputs: Contributed gender inputs to the following drafts: Peru's Climate Change Gender Action Plan; Honduras National Climate Change Adaptation Strategy for the Agri-Food Sector; Colombia's Roadmap for the Development of Adaptation Plans; Colombia's Adaptation based in communities Methodological Guide. Colombia and Costa Rica Livestock NAMAs, see gender inclusion in LivestockPlus project

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: This MOG has been discontinued due to the facing out of BI and their activities.

Brief summary of your actual 2016 contribution towards the selected MOG: The project does not address this outcome anymore, due to Bioversity International discontinuing activities under this FP. The project had achieved that the selected Central American countries submitted a joint statement on CSA to the COP21.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: This MOG has been discontinued due to the facing out of BI and their activities.

Summary of the gender and social inclusion dimension of the 2016 outputs: The project does not address this outcome anymore, due to Bioversity International discontinuing activities under this FP. The project had achieved that the selected Central American countries submitted a joint statement on CSA to the COP21.

F1 (before F4 - Philip): Priority setting contextualised with national stakeholders and capacity strengthened to apply outputs in policy formulation; including trade-off analyses, foresight activities, and quantification of regional socio-economic scenarios

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

Priority setting of NAMA and NAP sectors and subsequently interventions within NAMA and NAP are being conducted in participatory manner promoting evidence based decision making. Approach include MAC curves, trade-off and scenario analysis.

Brief summary of your actual 2016 contribution towards the selected MOG: Coffee NAMA: Science information tailored and used to guide implementation, specifically carbon assessment under different CSA interventions. Livestock NAMA: MAC curve training conducted to refine NAMA strategy and proposal. The National Adaptation Strategy in Honduras included a information component based on socio-economics scenarios of CCAFS.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: CCAFS contributes input on gender incorporation for one policy (NAMA/NAP/other climate risk prevention/response protocols) draft.

Summary of the gender and social inclusion dimension of the 2016 outputs: Contributed gender inputs to the following drafts: Peru's Climate Change Gender Action Plan; Honduras National Climate Change Adaptation Strategy for the Agri-Food Sector; Colombia's Roadmap for the Development of Adaptation Plans; Colombia's Adaptation based in communities Methodological Guide. Colombia and Costa Rica Livestock NAMAs, see gender inclusion in LivestockPlus project

F3 (Lini): Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

Identification of most promising NAMA and subsequent identification of activities are conducted using MAC curves, scenario analysis and trade-off analysis.

Brief summary of your actual 2016 contribution towards the selected MOG: Livestock NAMA CR: MAC curve training helps to prioritize practices and regions Coffee NAMA: Carbon stock for all coffee systems, regions and proposed interventions for Costa Rica has been calculated to guide the implementation of the NAMA. Livestock NAMAs CR/HN: Improve emission reduction estimates based on validation of ruminant model.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: CCAFS contributes input on gender incorporation for one policy (NAMA/NAP/other climate risk prevention/response protocols) draft.

Summary of the gender and social inclusion dimension of the 2016 outputs: Contributed gender inputs to the following drafts: Peru's Climate Change Gender Action Plan; Honduras National Climate Change Adaptation Strategy for the Agri-Food Sector; Colombia's Roadmap for the Development of Adaptation Plans; Colombia's Adaptation based in communities Methodological Guide. Colombia and Costa Rica Livestock NAMAs, see gender inclusion in LivestockPlus project

Major Output groups - 2015

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: The WB published an advisory report for policy makers in Nicaragua, which provides the basis for operationalizing the policy dialogue between the Government of Nicaragua, WB and other development partners and supports the prioritization of government investment and strategies. The report is based on CIAT/CCAFS CSA Country Profile for Nicaragua.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: In 2015 decision makers contributed to knowledge products on gender integration in climate change policies in the agricultural sector. Contributions demonstrate application of new knowledge learned and gender sensitivity in policymaking processes.

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: IFAD increasingly adopts CIAT/CCAFS science in project design and implementation in Comoros (climate/environmental assessments), Liberia (supply chain assessment), Uganda (CSA Rapid Appraisal) and in Nicaragua (Climate change impact assessment on coffee and cocoa supply chains). The IFAD/ASAP project using CCAFS/CIAT climate science are worth >100 MIO USD.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: In 2015 decision makers contributed to knowledge products on gender integration in climate change policies in the agricultural sector. Contributions demonstrate application of new knowledge learned and gender sensitivity in policymaking processes (see outcome reported)

F1 (before F4 - Philip): Priority setting contextualised with national stakeholders and capacity strengthened to apply outputs in policy formulation; including trade-off analyses, foresight activities, and quantification of regional socio-economic scenarios

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: The WB published an advisory report for policy makers in Nicaragua, which provides the basis for operationalizing the policy dialogue between the Government of Nicaragua, WB and other development partners and supports the prioritization of government investment and strategies. The report is based on CIAT/CCAFS CSA Country Profile for Nicaragua.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: In 2015 decision makers contributed to knowledge products on gender integration in climate change policies in the agricultural sector. Contributions demonstrate application of new knowledge learned and gender sensitivity in policymaking processes (see outcome reported)

F3 (Lini): Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: A NAMA Information Note (NINO) for Livestock sector in Colombia was submitted to the UNFCCC in September 2015, developed in collaboration with CCAFS/CIAT. CIAT-MAG-FITTACORI collaboration led to the approval of the Low Emission Livestock Strategy (Estrategia Nacional para el Desarrollo de la Ganadera Baja en Carbono, ENDGBC) in Costa Rica.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: In 2015 decision makers contributed to knowledge products on gender integration in climate change policies in the agricultural sector. Contributions demonstrate application of new knowledge learned and gender sensitivity in policymaking processes (see outcome reported)

Major Output groups - 2014

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F1 (before F4 - Philip): Priority setting contextualised with national stakeholders and capacity strengthened to apply outputs in policy formulation; including trade-off analyses, foresight activities, and quantification of regional socio-economic scenarios

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F3 (Lini): Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

5.2 Deliverables

D2721 - The Economic Advantage: Assessing the value of climate-change actions in agriculture

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/77628>

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: The Economic Advantage: Assessing the value of climate-change actions in agriculture

Description / Abstract: This report is aimed at readers who seek to build economic evidence in support of the inclusion of actions on agriculture in climate change plans and programmes, particularly at the national level under the umbrella of nationally determined contributions (NDCs) to the December 2015 Paris Agreement, which aims to restrict a rise in global temperatures and manage risks.

Publication / Creation date: 2016-11-01

Language: en

Country: <Not Defined>

Keywords: FOOD SECURITY, AGRICULTURE, CLIMATE CHANGE

Citation: Vermeulen S, Richards M, De Pinto A, Ferrarese D, Läderach P, Lan L, Luckert M, Mazzoli E, Plant L, Rinaldi R, Stephenson J, Watkiss P. 2016. The economic advantage: assessing the value of climate change actions in agriculture. Rome, Italy: International Fund for Agricultural Development (IFAD).

Handle: <http://hdl.handle.net/10568/77628>

DOI: <Not Defined>

Creator / Authors:

- Vermeulen, - Sonja
- Richards, - Meryl
- De Pinto, - Alex
- Ferrarese, - Dino

- Läderach, - Peter
- Lan, - Le
- Luckert, - Marty
- Mazzoli, - Enrico
- Plant, - Laura
- Rinaldi, - Roberto
- Stephenson, - Jim

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D356 - Regional policy recommendations for NAP Regions III & IV

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: Efforts have been moved to Honduras due to the lack of interest in Colombia.

Cross-cutting dimension:

<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: <Not Defined>

License adopted: <Not Defined>

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Tapasco, Jeimar <j.tapasco@cgiar.org>	Responsible

D106 - Study on opportunities to include "climate smart agriculture" in UNFCCC's negotiation agenda.

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Cancelled

Year of expected completion: 2015

Justification of new expected date of completion: ONF Andina has been faced out due to budget cuts.

Cross-cutting dimension:

<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: <Not Defined>

License adopted: <Not Defined>

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
ONF-Andina - Office National des Forêts-Andina	Castro, Augusto <acastro@onfandina.com>	Responsible



D1855 - Gender and CC bulletins

Main Information

Type: Outreach products

Subtype: Newsletter

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Enfoque en genero y cambio climático

Description / Abstract: Bulletin which is disseminated to listserve of decision-makers and practitioners every 3 months

Publication / Creation date: <Not Defined>

Language: Spanish

Country: Latin America

Keywords: gender, climate change, policy, agriculture

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Data sharing

Deliverable files:

<http://us10.campaign-archive1.com/?u=5a25cb8644445db2e4930e068&id=dffaccd63d>
<http://us10.campaign-archive1.com/?u=5a25cb8644445db2e4930e068&id=3a223797e5>
<http://us10.campaign-archive1.com/?u=5a25cb8644445db2e4930e068&id=e199953a1c>
<http://us10.campaign-archive1.com/?u=5a25cb8644445db2e4930e068&id=ebb6a81e9e>

Partners contributing to this deliverable:

Institution	Partner	Type
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CIAT-F1 (before F4 - Philip)-F3 (Lini)-LAM-P2 - Research Project

Submitted on 2017-02-20 at 04:03 (Reporting cycle 2016)



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



CIAT - Centro Internacional de Agricultura Tropical	Twyman, Jennifer <j.twyman@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana<T.Gumucio@CGIAR.ORG>	Other

D1856 - Panelist/presentation in Gender Network/CCAFS Webinar: Gender considerations in today's post COP 21 environment; what's missing?

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://www.slideshare.net/CGIAR/genderinclusive-climate-change-policies-in-latin-america>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gender-Inclusive Climate Change Policies in Latin America

Description / Abstract: Discussion of the previous COP in Lima and elaboration of a regional perspective; i.e. developing a regional initiative to combat climate change in Latin America (Colombia, Peru, Nicaragua, Honduras, Guatemala, El Salvador and Costa Rica) .

Publication / Creation date: 2016-02-26

Language: English

Country: Colombia, Peru, Costa Rica, Nicaragua, Honduras, Guatemala, El Salvador

Keywords: gender, climate change, policy

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Twyman, Jennifer <j.twyman@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana <T.Gumucio@CGIAR.ORG>	Other

D1857 - Panelist/presentation in GGCA Webinar: Implementing the Paris COP21 Agreement: Gender-Responsive Solutions and Changing Behaviors

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<https://vimeo.com/156596497>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gender-Inclusive Climate Change Policies in Latin America

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-02-24

Language: English

Country: Colombia, Peru, Nicaragua, Honduras, Costa Rica, Guatemala, El Salvador

Keywords: gender, climate change, policy

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura	Twyman, Jennifer	

CIAT-F1 (before F4 - Philip)-F3 (Lini)-LAM-P2 - Research Project

Submitted on 2017-02-20 at 04:03 (Reporting cycle 2016)



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



Tropical	<j.twyman@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana<T.Gumucio@CGIAR.ORG>	Other

D2434 - Blog on 2015 meta-analysis of gender in climate change policies

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://pim.cgiar.org/2016/04/07/mining-gender-information-in-policy-research/>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Mining Gender Information in Policy Research

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-04-07

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana <T.Gumucio@CGIAR.ORG>	Responsible

D1858 - Shared FTA / CCAFS: Gender agroforestry LAM webinar presentation for policymakers and rural development organizations

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting
- Analysis of sex-disaggregated data

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

http://foreststreesagroforestry.org/wp-content/uploads/pdf/Webinar_11-22-2016_Gumucio.pdf

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gender, Agroforestry and Climate Change in Latin America

Description / Abstract: Through analysis of the data from a CCAFS gender survey in the Tuma la Dalia, Nicaragua, Climate Smart Village, the presentation highlights the importance of recognizing women's and men's contributions to smallholder production systems in order to promote the successful adoption of CSA practices, including those related to agroforestry.

Publication / Creation date: 2016-11-23

Language: Spanish

Country: Nicaragua, Peru

Keywords: gender, agroforestry, climate change

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana
- Mathez - Sarah-Lan

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Twyman, Jennifer <j.twyman@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana <T.Gumucio@CGIAR.ORG>	Other

D1859 - Bogota, National Agroclimatic Committee

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://www.aclimatecolombia.org/boletin-agroclimatico/>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Memoria del Taller: Co-construyendo una propuesta de capacitaci?n e intercambio de conocimiento en g?nero y cambio clim?tico en Colombia

Description / Abstract: El viernes 23 de septiembre de 2016 tuvo lugar el taller ?Co-construyendo una propuesta de capacitaci?n e intercambio de conocimiento en g?nero y cambio clim?tico en Colombia,? organizado por el Centro Internacional de Agricultura Tropical (CIAT), en conjunto con el Programa de Investigaci?n del CGIAR en Cambio Clim?tico, Agricultura y Seguridad Alimentaria (CCAFS). El taller ten?a como objetivo identificar los intereses y metas de actores clave en el pa?s en relaci?n con un proyecto potencial basado en capacitaci?n e intercambio de conocimiento en g?nero y cambio clim?tico, para la formulaci?n de pol?ticas p?blicas eficaces y equitativas en los sectores agropecuarios y ambientales a nivel local y departamental. Mensual meeting in Bogotá, led by CIAT/CCAFS and MADR brings together more than 20 Colombian institutions to recommend adaptation and mitigation measures in the face of climate variability.

Publication / Creation date: 2016-10-26

Language: Spanish

Country: Colombia

Keywords: gender, climate change, policy

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana<0000-0001-9389-2703>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Obando Bonilla, Diego <d.obando@cgiar.org>	Responsible
IDEAM - Instituto de Hidrología, Meteorología y Estudios Ambientales de Colombia	Ruiz, Jose Franklyn <jruiz@ideam.gov.co>	Other

D1860 - Tailored climate change science information for NAMA cafe - Review of carbon assessments

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: Yes

License adopted: Open access

Allow modifications: Yes

Deliverable Metadata

Disseminated title: Revision de literatura acerca del almacenamiento de carbono

Description / Abstract: An revision of all the carbon stock data available for coffee globally.

Publication / Creation date: 2016-02-01

Language: Spanish

Country: Global

Keywords: Coffee, carbon stock, allometric equations

Citation: Ovalle, 2016. Revision de literatura acerca del almacenamiento de carbono

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Deliverable Data sharing

Deliverable files:

<https://marlo.cgiar.org/data/ccafs/projects//2/deliverableDataSharing/Revisión%20de%20literatura%20Captura%20de%20Carbono.pdf>

Partners contributing to this deliverable:

CIAT-F1 (before F4 - Philip)-F3 (Lini)-LAM-P2 - Research Project

Submitted on 2017-02-20 at 04:03 (Reporting cycle 2016)



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D1421 - Collaborative plan to include scientific evidence in the mitigation actions for the Peruvian highlands.

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIP - Centro Internacional de la Papa	Turin, Cecilia	Responsible

<c.turin@cgiar.org>

D1422 - Women empowerment and gender differentiated development opportunities in the Peruvian central high Andes.

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: CIP did no receive any funding in 2016 and left the consortium.

Cross-cutting dimension:

- Gender

Gender level(s):

- Analysis of sex-disaggregated data

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name:

Indicators for journal articles: <Not Defined>

Publication acknowledge: No

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

[<Not Defined>](#)

Partners contributing to this deliverable:

Institution	Partner	Type
CIP - Centro Internacional de la Papa	Turin, Cecilia <c.turin@cgiar.org>	Responsible

D1424 - Decision making for turning grasslands into maca crops in the Peruvian central high Andes

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name:

Indicators for journal articles: <Not Defined>

Publication acknowledge: No

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F A I R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIP - Centro Internacional de la Papa	Turin, Cecilia <c.turin@cgiar.org>	Responsible

D1425 - Specific and generic adaptive capacities of small holder farmers of the Peruvian Central high Andes

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

- Gender

Gender level(s):

- Collection of sex-disaggregated data

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name:

Indicators for journal articles: <Not Defined>

Publication acknowledge: No

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIP - Centro Internacional de la Papa	Turin, Cecilia <c.turin@cgiar.org>	Responsible

D1426 - Soil carbon stocks at different land uses in the Peruvian Central high Andes

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name:

Indicators for journal articles: <Not Defined>

Publication acknowledge: No

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIP - Centro Internacional de la Papa	Turin, Cecilia <c.turin@cgiar.org>	Responsible

D338 - Guidelines/recommendations for gender inclusive climate change policies and institutions

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues
- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79798>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Inclusión del enfoque de género en políticas de cambio climático: Un análisis de siete países latinoamericanos

Description / Abstract: El cambio climático genera impactos diferenciados de género. Por esto, las políticas orientadas a formular estrategias de mitigación y adaptación deben tomar en cuenta necesidades e intereses de mujeres y hombres. Gobiernos, sectores agropecuarios y medioambientales latinoamericanos han ido desarrollando con mayor frecuencia estrategias de adaptación y mitigación al fenómeno por su creciente importancia en el mundo. En ese sentido, esta Política en Síntesis presenta un panorama general del estado de la inclusión del enfoque de género en políticas relacionadas al cambio climático en siete países priorizados del Programa de Investigación del CGIAR en Cambio Climático, Agricultura y Seguridad Alimentaria (CCAFS por sus siglas en inglés) en América Latina. Los resultados sugieren que en procesos de formulación de políticas, esfuerzos que promueven la coordinación entre sectores son clave para una integración exitosa del enfoque de género en la planificación del cambio climático.

Publication / Creation date: 2017-02-01

Language: es

Country: COLOMBIA,COSTA RICA,EL SALVADOR,GUATEMALA,HONDURAS,NICARAGUA,PERU

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY,GENDER ANALYSIS,POLICIES

Citation: Gumucio T, Tafur M, Loucel C, Twyman J. 2016. Inclusión del enfoque de género en políticas de cambio climático: Un análisis de siete países latinoamericanos. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79798>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana<0000-0001-9389-2703>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Twyman, Jennifer <j.twyman@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana<T.Gumucio@CGIAR.ORG>	Other

D2386 - Reseach proposal Climate and Food Security (Honduras)

Main Information

Type: Outreach products

Subtype: Factsheet, Project Note

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: Not Disseminated

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

https://marlo.cgiar.org/data/ccafs/projects//2/deliverableDataSharing/DoS%20CliFos%20Platform%20Form_Climate%20and%20Food%20Security%20in%20Central%20America_Nov7.pdf

Partners contributing to this deliverable:

Institution	Partner	Type
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CIAT-F1 (before F4 - Philip)-F3 (Lini)-LAM-P2 - Research Project

Submitted on 2017-02-20 at 04:03 (Reporting cycle 2016)



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



CIAT - Centro Internacional de Agricultura Tropical	Tapasco, Jeimar <j.tapasco@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Obando Bonilla, Diego<d.obando@cgiar.org>	Other

D1427 - Impact of land use change from grasslands to maca crop on soil carbon stocks

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name:

Indicators for journal articles: <Not Defined>

Publication acknowledge: No

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIP - Centro Internacional de la Papa	Turin, Cecilia <c.turin@cgiar.org>	Responsible

D1492 - Gender disaggregated data on land use change, decision making and climate change perceptions

Main Information

Type: Data, models and tools

Subtype: Database/Dataset/Data documentation

Status: Cancelled

Year of expected completion: 2015

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

- Gender

Gender level(s):

- Analysis of sex-disaggregated data

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: Intellectual Property Rights (confidential information)

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Process of data quality assurance: <Not Defined>

Data dictionary: <Not Defined>

Are the tools used for data collection available: <Not Defined>

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIP - Centro Internacional de la Papa	Turin, Cecilia <c.turin@cgiar.org>	Responsible

D1493 - Key Ecosystem Services and Ecological Intensification of Agriculture in the high Tropical Andes

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Cancelled

Year of expected completion: 2015

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
	Turin, Cecilia	



CIP - Centro Internacional de la Papa	<c.turin@cgiar.org>	Responsible
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D2390 - Blog on gender and climate change policy workshop in Bogota Colombia

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<https://ccaafs.cgiar.org/news/building-initiative-in-clude-gender-focus-public-policies-climate-change-bottom>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Building an initiative to include a gender focus in public policies on climate change from the bottom-up

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana <T.Gumucio@CGIAR.ORG>	Responsible

D2392 - Spanish version of blog on Bogota Colombia workshop

Main Information

Type: Outreach products

Subtype: Blog

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: Main efforts and resources from Colombia have shifted to Honduras due to the lack of buy in by the Colombian government.

Cross-cutting dimension:

- Gender

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

Dissemination Channel: Other

<https://ccafs.cgiar.org/es/creando-iniciativa-incluir-enfoque-genero-politicas-publicas-cambio-climatico>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Creando una iniciativa para incluir el enfoque de género en las políticas sobre el cambio climático

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana <T.Gumucio@CGIAR.ORG>	Responsible

D345 - Portfolio of CSA alternatives for preserving soil carbon stocks and mitigating carbon emissions

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Cancelled

Year of expected completion: 2016

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
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CIP - Centro Internacional de la Papa	Turin, Cecilia <c.turin@cgiar.org>	Responsible
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D2393 - Blog on guidelines for gender-inclusive climate change policymaking

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting
- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<https://ccafs.cgiar.org/news/identifying-gender-inclusive-climate-change-policymaking-processes-latin-america>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Identifying gender-inclusive climate change policymaking processes in Latin America

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana <T.Gumucio@CGIAR.ORG>	Responsible

D1434 - Climate-Smart Livestock Systems: An Assessment of Carbon Stocks and GHG Emissions in Nicaragua

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/78691>

Open access: Yes

License adopted: Journal open access license.

Allow modifications: Yes

Deliverable Metadata

Disseminated title: Climate-Smart Livestock Systems: An Assessment of Carbon Stocks and GHG Emissions in Nicaragua

Description / Abstract: Livestock systems in the tropics can contribute to mitigate climate change by reducing greenhouse gas (GHG) emissions and increasing carbon accumulation. We quantified C stocks and GHG emissions of 30 dual-purpose cattle farms in Nicaragua using farm inventories and lifecycle analysis. Trees in silvo-pastoral systems were the main C stock aboveground (16 ± 24 Mg ha⁻¹), compared with adjacent secondary forests (43 Mg C ha⁻¹). We estimated that methane from enteric fermentation contributed 1.6 kg CO₂-eq., and nitrous oxide from excreta 0.4 kg CO₂-eq. per kg of milk produced. Seven farms that we classified as climate-smart agriculture (CSA) out of 16 farms had highest milk yields (6.2 kg cow⁻¹day⁻¹) and lowest emissions (1.7 kg CO₂-eq. per kg milk produced). Livestock on these farms had higher-quality diets, especially during the dry season, and manure was managed better. Increasing the numbers of CSA farms and improving CSA technology will require better enabling policy and incentives such as payments for ecosystem services.

Publication / Creation date: 2017-01-01

Language: en

Country: NICARAGUA

Keywords: FARMS,LIVESTOCK,METHANE,GRASSES,FERMENTATION,FERTILIZER,CARBON DIOXIDE,SEASONS,CLIMATE-SMART AGRICULTURE,NICARAGUA,EXPLORACIONES AGRARIAS,GANADO,METANO,GRAMINEAS,FERMENTACIÓN,FERTILIZACIÓN,DIÓXIDO DE CARBONO,ESTACIONES DEL AÑO,AGRICULTURA CLIMÁTICAMENTE INTELIGENTE

Citation: Gaitan L, Läderach P, Graefe S, Rao I, van der Hoek R (2016) Climate-Smart Livestock Systems: An Assessment of Carbon Stocks and GHG Emissions in Nicaragua. PLoS ONE 11(12):

e0167949. doi:10.1371/journal.pone.0167949

Handle: <http://hdl.handle.net/10568/78691>

DOI: <http://dx.doi.org/10.1371/journal.pone.0167949>

Creator / Authors:

- Gaitán, - Lucía
- Läderach, - Peter
- Graefe, - Sophie
- Rao, - Idupulapati M.
- van der Hoek, - Rein

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: PLoS ONE

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: Yes

Flagships contribution: • LIVESTOCK AND FISH

- CCAFS - F1 (BEFORE F4 - PHILIP)
- CCAFS - F2 (BEFORE F1 - ANDY)
- CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2394 - Spanish version of blog on guidelines for gender-inclusive climate change policymaking

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Development of innovations/ interventions/ policies with explicit gender targeting
- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<https://ccaafs.cgiar.org/es/son-sensibles-temas-genero-politicas-cambio-climatico-america-latina>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Género y políticas de cambio climático en America Latina

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Gumucio - Tatiana

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Gumucio, Tatiana <T.Gumucio@CGIAR.ORG>	Responsible

D347 - Data on carbon storage and emissions from High Andean wetlands and natural grasslands

Main Information

Type: Data, models and tools

Subtype: Database/Dataset/Data documentation

Status: Cancelled

Year of expected completion: 2015

Justification of new expected date of completion: CIP did not receive any funding in 2016 and left the project.

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F A I R**

Process of data quality assurance: <Not Defined>

Data dictionary: <Not Defined>

Are the tools used for data collection available: <Not Defined>

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIP - Centro Internacional de la Papa	Turin, Cecilia <c.turin@cgiar.org>	Responsible

D1435 - Almacenamiento de carbono en sistemas agro-forestales con cafe en Costa Rica

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: Yes

License adopted: Open access

Allow modifications: Yes

Deliverable Metadata

Disseminated title: Almacenamiento de carbono en sistemas agro-forestales con cafe en Costa Rica

Description / Abstract: Assessment of coffee carbon stock for all coffee systems in Costa Rica

Publication / Creation date: 2016-10-01

Language: Spanish

Country: Costa Rica

Keywords: Coffee, carbon stock, allometric equations, Costa Rica

Citation: Ovalle. Oriana. 2016. Almacenamiento de carbono en sistemas agro-forestales con cafe en Costa Rica

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: 

Deliverable Data sharing

Deliverable files:

[https://marlo.cgiar.org/data/ccafs/projects//2/deliverableDataSharing/AlmacenamientoCcafe%20\(1\).pdf](https://marlo.cgiar.org/data/ccafs/projects//2/deliverableDataSharing/AlmacenamientoCcafe%20(1).pdf)

Partners contributing to this deliverable:

CIAT-F1 (before F4 - Philip)-F3 (Lini)-LAM-P2 - Research Project

Submitted on 2017-02-20 at 04:03 (Reporting cycle 2016)



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2715 - Climate change adaptation of coffee production in space and time

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/77563>

Open access: Yes

License adopted: Open access

Allow modifications: Yes

Deliverable Metadata

Disseminated title: Climate change adaptation of coffee production in space and time

Description / Abstract: Coffee is grown in more than 60 tropical countries on over 11 million ha by an estimated 25 million farmers, most of whom are smallholders. Several regional studies demonstrate the climate sensitivity of coffee (*Coffea arabica*) and the likely impact of climate change on coffee suitability, yield, increased pest and disease pressure and farmers' livelihoods. The objectives of this paper are (i) to quantify the impact of progressive climate change to grow coffee and to produce high quality coffee in Nicaragua and (ii) to develop an adaptation framework across time and space to guide adaptation planning. We used coffee location and cup quality data from Nicaragua in combination with the Maxent and CaNaSTA crop suitability models, the WorldClim historical data and the CMIP3 global circulation models to predict the likely impact of climate change on coffee suitability and quality. We distinguished four different impact scenarios: Very high (coffee disappears), high (large negative changes), medium (little negative changes) and increase (positive changes) in climate suitability. During the Nicaraguan coffee roundtable, most promising adaptation strategies were identified, which we then used to develop a two-dimensional adaptation framework for coffee in time and space. Our analysis indicates that incremental adaptation may occur over short-term horizons at lower altitudes, whereas the same areas may undergo transformative adaptation in the longer term. At higher elevations incremental adaptation may be needed in the long term. The same principle and framework is applicable across coffee growing regions around the world.

Publication / Creation date: 2016-11-01

Language: en

Country: NICARAGUA

Keywords: CLIMATE CHANGE,COFFEE,ADAPTATION,SIMULATION MODELS,CAFÉ,CAMBIO CLIMÁTICO,ADAPTACIÓN,MODELOS DE SIMULACIÓN

Citation: Läderach, Peter; Ramirez-Villegas, Julian; Navarro-Racines, Carlos; Zelaya, Carlos; Martinez-Valle, Armando; Jarvis, Andy. 2016. Climate change adaptation of coffee production in space and time . Climate Change 1-16 p.

Handle: <http://hdl.handle.net/10568/77563>

DOI: <http://dx.doi.org/10.1007/s10584-016-1788-9>

Creator / Authors:

- Läderach, - Peter
- Ramirez-Villegas, - Julian
- Navarro-Racines, - Carlos Eduardo
- Zelaya, - Carlos
- Martinez-Valle, - Armando
- Jarvis, - Andy

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Springer

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: Yes

Flagships contribution: • CCAFS - F2 (BEFORE F1 - ANDY)

• CCAFS - F1 (BEFORE F4 - PHILIP)

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2716 - Prioritizing climate-smart livestock technologies in rural Tanzania: a minimum data approach

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/75727>

Open access: Yes

License adopted: Open access

Allow modifications: Yes

Deliverable Metadata

Disseminated title: Prioritizing climate-smart livestock technologies in rural Tanzania: a minimum data approach

Description / Abstract: Crop-livestock production systems play an important role in the livelihoods of many rural communities in sub-Saharan Africa (SSA) but are vulnerable to the adverse impacts of climate change. Understanding which farming options will give the highest return on investment in light of climate change is critical information for decisionmaking. While there is continued investment in testing adaptation options using on-farm experiments, simulation models remain important tools for 'ex-ante' assessments of the impacts of proposed climate-smart agricultural technologies (CSA). This study used the Ruminant model and the Trade-offs Analysis model for Multi-Dimensional Impact Assessment (TOA-MD) to assess how improved livestock management options affect the three pillars of CSA: increased productivity, improved food security, and reduced greenhouse gas (GHG) emissions. Our sample was stratified into: 1) households with local cow breeds (n = 28); 2) households with improved dairy cow breeds (n = 70); and 3) households without dairy cows (n = 66). Results showed that the predicted adoption rates for improved livestock feeding among households with improved dairy cows (stratum 2) were likely to be higher compared to households with only local cows (stratum 1). Both households with local cows and those with improved cows had increased income and food security. However, overall poverty reduction was only modest for households with local cows. Expected methane emissions intensity declined with adoption of improved livestock feeding strategies both in stratum 1 and stratum 2, and greater impacts were observed when households in stratum 2 received an additional improved cow breed. Providing a cow to households that were not keeping cows showed substantial economic gains. Additional research is, however, needed to understand why those farms currently do not have cows, which may determine if the predicted adoption rates are

feasible.

Publication / Creation date: 2016-06-01

Language: en

Country: TANZANIA

Keywords: CLIMATE-SMART AGRICULTURE,AGRICULTURE,FOOD SECURITY,LIVESTOCK,RUMINANTS,TANZANIA,AGRICULTURA CLIMÁTICAMENTE INTELIGENTE,AGRICULTURA,SEGURIDAD ALIMENTARIA,GANADO,RUMIANTE

Citation: Shikuku, Kelvin M.; Valdivia, Roberto O.; Paul, Birthe K.; Mwongera, Caroline; Winowiecki, Leigh A.; Läderach, Peter; Herrero, Mario; Silvestri, Silvia. 2016. Prioritizing climate-smart livestock technologies in rural Tanzania: A minimum data approach . Agricultural Systems. 151: 204-216.

Handle: <http://hdl.handle.net/10568/75727>

DOI: <https://dx.doi.org/10.1016/j.agsy.2016.06.004>

Creator / Authors:

- Shikuku, - Kelvin M.
- Valdivia, - Roberto
- Paul, - Birthe
- Mwongera, - Caroline
- Winowiecki, - Leigh A.
- Läderach, - Peter
- Herrero, - Mario
- Silvestri, - Silvia

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Elsevier

Indicators for journal articles: • This journal article is an ISI publication

- This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • CCAFS - F2 (BEFORE F1 - ANDY)

- CCAFS - F1 (BEFORE F4 - PHILIP)

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2717 - Towards a Collaborative Research

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/77177>

Open access: Yes

License adopted: Open access

Allow modifications: Yes

Deliverable Metadata

Disseminated title: Mapping climate change adaptive capacity and vulnerability of smallholder agricultural livelihoods in Central America: ranking and descriptive approaches to support adaptation strategies

Description / Abstract: The scientific community has recognized the importance of integrating farmer's perceptions and knowledge (FPK) for the development of sustainable pest and disease management strategies. However, the knowledge gap between indigenous and scientific knowledge still contributes to misidentification of plant health constraints and poor adoption of management solutions. This is particularly the case in the context of smallholder farming in developing countries. In this paper, we present a case study on coffee production in Uganda, a sector depending mostly on smallholder farming facing a simultaneous and increasing number of socio-ecological pressures. The objectives of this study were (i) to examine and relate FPK on Arabica Coffee Pests and Diseases (CPaD) to altitude and the vegetation structure of the production systems; (ii) to contrast results with perceptions from experts and (iii) to compare results with field observations, in order to identify constraints for improving the information flow between scientists and farmers. Data were acquired by means of interviews and workshops. One hundred and fifty farmer households managing coffee either at sun exposure, under shade trees or inter-cropped with bananas and spread across an altitudinal gradient were selected. Field sampling of the two most important CPaD was conducted on a subset of 34 plots. The study revealed the following findings: (i) Perceptions on CPaD with respect to their distribution across altitudes and perceived impact are partially concordant among farmers, experts and field observations (ii) There are discrepancies among farmers and experts regarding management

practices and the development of CPaD issues of the previous years. (iii) Field observations comparing CPaD in different altitudes and production systems indicate ambiguity of the role of shade trees. According to the locality-specific variability in CPaD pressure as well as in FPK, the importance of developing spatially variable and relevant CPaD control practices is proposed.

Publication / Creation date: 2016-09-01

Language: en

Country: Uganda

Keywords: CLIMATE CHANGE, SMALLHOLDERS, LIVELIHOODS, CROP MODELLING, ADAPTATION, FARMERS, CAMBIO CLIMÁTICO, MEDIOS DE VIDA, MODELIZACIÓN DE LOS CULTIVOS, ADAPTACIÓN, AGRICULTORES

Citation: Liebig, Theresa; Jassogne, Laurence; Rahn, Eric; Läderach, Peter; Poehling, Hans-Michael; Kucel, Patrick; Van Asten, Piet; Avelino, Jacques. 2016. Towards a collaborative research: a case study on linking science to farmers' perceptions and knowledge on Arabica coffee pests and diseases and its management . PLoS One 11(8):e0159392.

Handle: <http://hdl.handle.net/10568/77177>

DOI: <https://dx.doi.org/10.1007/s10584-016-1792-0>

Creator / Authors:

- Liebig, - Theresa
- Jassogne, - Laurence
- Rahn, - Eric
- Läderach, - Peter
- Poehling, - Hans-Michael
- Kucel, - Patrick
- Van Asten, - Piet
- Avelino, - Jacques

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: PLoS ONE

Indicators for journal articles: • This journal article is an ISI publication

- This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: No

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2718 - The economic advantage: assessing the value of climate change actions in agriculture

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/77628>

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: The Economic Advantage: Assessing the value of climate-change actions in agriculture

Description / Abstract: This report is aimed at readers who seek to build economic evidence in support of the inclusion of actions on agriculture in climate change plans and programmes, particularly at the national level under the umbrella of nationally determined contributions (NDCs) to the December 2015 Paris Agreement, which aims to restrict a rise in global temperatures and manage risks.

Publication / Creation date: 2016-11-01

Language: en

Country: <Not Defined>

Keywords: FOOD SECURITY, AGRICULTURE, CLIMATE CHANGE

Citation: Vermeulen S, Richards M, De Pinto A, Ferrarese D, Läderach P, Lan L, Luckert M, Mazzoli E, Plant L, Rinaldi R, Stephenson J, Watkiss P. 2016. The economic advantage: assessing the value of climate change actions in agriculture. Rome, Italy: International Fund for Agricultural Development (IFAD).

Handle: <http://hdl.handle.net/10568/77628>

DOI: <Not Defined>

Creator / Authors:

- Vermeulen, - Sonja
- Richards, - Meryl
- De Pinto, - Alex
- Ferrarese, - Dino
- Läderach, - Peter

- Lan, - Le
- Luckert, - Marty
- Mazzoli, - Enrico
- Plant, - Laura
- Rinaldi, - Roberto
- Stephenson, - Jim

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2719 - Assessing high-impact spots of climate change

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/70960>

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Assessing high-impact spots of climate change: spatial yield simulations with decision support system for agrotechnology transfer (DSSAT) model

Description / Abstract: Drybeans (*Phaseolus vulgaris* L.) are an important subsistence crop in Central America. Future climate change may threaten drybean production and jeopardize smallholder farmers' food security. We estimated yield changes in drybeans due to changing climate in these countries using downscaled data from global circulation models (GCMs) in El Salvador, Guatemala, Honduras, and Nicaragua. We generated daily weather data, which we used in the Decision Support System for Agrotechnology Transfer (DSSAT) drybean submodel. We compared different cultivars, soils, and fertilizer options in three planting seasons. We analyzed the simulated yields to spatially classify high-impact spots of climate change across the four countries. The results show a corridor of reduced yields from Lake Nicaragua to central Honduras (10–38 % decrease). Yields increased in the Guatemalan highlands, towards the Atlantic coast, and in southern Nicaragua (10–41 % increase). Some farmers will be able to adapt to climate change, but others will have to change crops, which will require external support. Research institutions will need to devise technologies that allow farmers to adapt and provide policy makers with feasible strategies to implement them.

Publication / Creation date: 2016-02-01

Language: en

Country: <Not Defined>

Keywords: PHASEOLUS VULGARIS L., CLIMATE CHANGE, SIMULATION MODELS, SMALLHOLDER, CENTRAL AMERICA, CAMBIO CLIMÁTICO, MODELOS DE SIMULACIÓN, AMERICA CENTRAL

Citation: Eitzinger, Anton; Läderach, Peter; Rodriguez, Beatriz; Fisher, Myles; Beebe, Stephen; Sonder, Kai; Schmidt, Axel. 2016. Assessing high-impact spots of climate change: spatial yield simulations with decision support system for agrotechnology transfer (DSSAT) model. Mitigation and Adaptation

Strategies for Global Change 18 p.

Handle: <http://hdl.handle.net/10568/70960>

DOI: <https://dx.doi.org/10.1007/s11027-015-9696-2>

Creator / Authors:

- Eitzinger, - Anton
- Läderach, - Peter
- Rodriguez, - Beatriz
- Fisher, - Myles
- Beebe, - Stephen E.
- Sonder, - Kai
- Schmidt, - Axel

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Springer

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: Yes

Flagships contribution: • CCAFS - F1 (BEFORE F4 - PHILIP)

• CCAFS - F2 (BEFORE F1 - ANDY)

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D96 - Regional modeling of climate change impacts on smallholder agriculture and ecosystems in Central America

Main Information

Type: Data, models and tools

Subtype: Database/Dataset/Data documentation

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/78730>

Open access: Yes

License adopted: CC_LICENSES

Deliverable Metadata

Disseminated title: Regional modeling of climate change impacts on smallholder agriculture and ecosystems in Central America

Description / Abstract: Climate change will have serious repercussions for agriculture, ecosystems, and farmer livelihoods in Central America. Smallholder farmers are particularly vulnerable due to their reliance on agriculture and ecosystem services for their livelihoods. There is an urgent need to develop national and local adaptation responses to reduce these impacts, yet evidence from historical climate change is fragmentary. Modeling efforts help bridge this gap. Here, we review the past decade of research on agricultural and ecological climate change impact

Publication / Creation date: 2017-01-01

Language: en

Country: BELIZE,EL SALVADOR,GUATEMALA,HONDURAS,NICARAGUA

Keywords: SMALLHOLDER,CLIMATE CHANGE,LIVELIHOODS,FARMERS,ECOSYSTEM SERVICES,CROP YIELD,WATER AVAILABILITY,CENTRAL AMERICA,MEDIOS DE VIDA,CAMBIO CLIMÁTICO,SERVICIOS DE LOS ECOSISTEMAS,RENDIMIENTO DE CULTIVOS,DISPONIBILIDAD DEL AGUA,AMÉRICA CENTRAL

Citation: Hannah, Lee; Donatti, Camila I.; Harvey, Celia A.; Alfaro, Eric; Rodriguez, Daniel Andres; Bouroncle, Claudia; Castellanos, Edwin; Diaz, Freddy; Fung, Emily; Hidalgo, Hugo G.; Imbach, Pablo; Läderach, Peter; Landrum, Jason P.; Solano, Ana Lucía. 2016. Regional modeling of climate change impacts on smallholder agriculture and ecosystems in Central America. Climate Change . 1-17 p.

Handle: <http://hdl.handle.net/10568/78730>

DOI: <http://dx.doi.org/10.1007/s10584-016-1867-y>

Creator / Authors:

- Hannah, - Lee
- Donatti, - Camila I.

- Harvey, - Celia A.
- Alfaro, - Eric
- Rodriguez, - Daniel Andres
- Bouroncle, - Claudia
- Castellanos, - Edwin
- Diaz, - Freddy
- Fung, - Emily
- Hidalgo, - Hugo G.
- Imbach, - Pablo
- Läderach, - Peter
- Landrum, - Jason P.
- Solano, - Ana Lucía

Deliverable Quality check

FAIR Compliant: **F A I R**

Process of data quality assurance: <Not Defined>

Data dictionary: <Not Defined>

Are the tools used for data collection available: <Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2720 - Mapping climate change adaptive capacity and vulnerability of smallholder agricultural livelihoods

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/77177>

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Mapping climate change adaptive capacity and vulnerability of smallholder agricultural livelihoods in Central America: ranking and descriptive approaches to support adaptation strategies

Description / Abstract: Climate change is one of the main threats to rural livelihoods in Central America, especially for small and medium-sized farmers. Climate change vulnerability assessment (CCVA) integrates biophysical and socioeconomic information to support policy decisions. We present a CCVA of agricultural livelihoods of four countries in Central America, at the municipality level. We use the IPCC definition of vulnerability, and address the potential impact of climate change on suitability for major crops and adaptive capacity using indicators of basic human needs, as well as resources for innovation and action framed in a livelihoods approach. Adaptive capacity was estimated using ranking techniques for municipalities and descriptive multivariate analysis. Projected changes in climate suitability for crops show a wide variation between Guatemala, El Salvador, Honduras and Nicaragua, and within each country. Cluster analysis of adaptive capacity values shows a gradient between higher values close to urban areas and lower values in agricultural frontier areas and in those prone to drought. Municipalities with a high proportional area under subsistence crops tend to have less resources to promote innovation and action for adaptation. Our results suggest that a full spectrum of adaptation levels and strategies must be considered in the region to achieve

Publication / Creation date: 2016-09-01

Language: en

Country: EL SALVADOR,GUATEMALA,HONDURAS,NICARAGUA

Keywords: CLIMATE CHANGE,SMALLHOLDERS,LIVELIHOODS,CROP MODELLING,ADAPTATION,FARMERS,CAMBIO CLIMÁTICO,MEDIOS DE VIDA,MODELIZACIÓN DE LOS CULTIVOS,ADAPTACIÓN,AGRICULTORES

Citation: Bouroncle, Claudia; Imbach, Pablo; Rodríguez-Sánchez, Beatriz; Medellín, Claudia; Martínez-Valle, Armando; Läderach, Peter. 2016. Mapping climate change adaptive capacity and vulnerability of smallholder agricultural livelihoods in Central America: ranking and descriptive approaches to support adaptation strategies . Climatic Change . 1-15 p.

Handle: <http://hdl.handle.net/10568/77177>

DOI: <https://dx.doi.org/10.1007/s10584-016-1792-0>

Creator / Authors:

- Bouroncle, - Claudia
- Imbach, - Pablo
- Rodríguez-Sánchez, - Beatriz
- Martínez-Valle, - Armando
- Läderach, - Peter

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Springer

Indicators for journal articles: • This journal article is an ISI publication

- This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • CCAFS - F2 (BEFORE F1 - ANDY)

- CCAFS - F1 (BEFORE F4 - PHILIP)

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

5.3 Project Highlights

Project highlight 140	
Title: Establishment of a climate change policy hub for Asia	
Author: Peter Läderach	Subject: Climate policy hub to support public and private sector in Asia.
Publisher:	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Innovative non-research partnerships • Successful communications • Capacity enhancement • Inter-center collaboration • Policy engagement • Food security 	Is global: No
Start date: Jan 2016	End date: Dec 2017
Keywords: Climate policy, Asia, NDC, CSA	Countries: Cambodia, Vietnam, Bangladesh, Sri Lanka, Myanmar (Burma), Lao PDR, Bhutan, Nepal, Indonesia, Philippines, Pakistan
Highlight description: In most Asian countries, agriculture is likely to be the sector most affected by the impacts of climate change. Following the Paris Agreement in 2015, many countries in South East Asia have pledged to reduce their emissions, including from the agriculture and land-use. A major turnaround of these sectors is therefore needed to mitigate their emissions but also to adapt to global warming and to make them more resilient. Such change in paradigm will require an active involvement of multiple players such as policymakers, donors as well as the private sector. All these stakeholders will need relevant, accessible, science-based and interdisciplinary advice to facilitate decision-making. CIAT, using its long-standing experience in agriculture and climate science, is therefore well-placed to be a key actor in supporting this transition. To facilitate this process and consolidate the previous successful work on climate change policy work globally and in the region is CIAT launching its "Climate Policy Hub".	
Introduction / Objectives: The objectives of the climate policy hub is to support Asian countries and private sector on their climate policies and strategies. For the public sector we initially support the countries on refining NDCs, elaborating MRVs and accessing GCF funding. For the private sector we are supporting companies prioritizing CSA interventions at origin and meeting companies' low emission supply chain targets.	
Results: - CIAT is currently working on 10 CSA country profiles for Asia and there are likely another 14 going to be added covering the Pacific islands - Preparation of CSA science inputs for FAO for the APEC forum in 2017 - Preparation of CSA science inputs for the Regional Conference for Asia and Pacific (APRC 34) where all Ag ministers will participate. - Implement Climate vulnerability assessment and CSA prioritization for 17 regions in the Philippines to establish and scale CSV.	
Partners: FAO WB Department of Agriculture in the Philippines Ag departments across Asia	
Links / Sources for further information: The hub will be formally launched at the 50th anniversary of CIAT in April. We will have plenty of material after that for CCAFS.	

Project highlight 208

Title: Work alliance between CIAT/CCAFS and Honduras Agriculture & Livestock Secretary (SAG)

Author: Diego Obando Bonilla

Subject: CIAT/CCAFS strengthens actions with presence in the region

Publisher:

Year reported: 2016

Project highlights types:

- Innovative non-research partnerships
- Participatory action research
- Successful communications
- Capacity enhancement
- Policy engagement
- Food security

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords: Incidence, Alignment, policymaking, Climate Smart Agriculture

Countries: Honduras

Highlight description: In the framework of a new technical cooperation agreement between the SAG of Honduras and CIAT / CCAFS, joint work is carried out to strengthen the resilience of the agri-food sector to changes in the climate, through workshops at central and regional levels, started with diagnosis of research needs and in an articulated way presented research proposals aligned with the strategy of adaptation to climate change. In the framework of this agreement we also aim to provide support in the formulation of policies such as NAMA coffee and livestock.

Introduction / Objectives: Considering the high level of vulnerability of the country to climate change and climatic variability and the high importance of the agri-food sector, it was proposed to construct in an articulated way with state policies a research proposal, it seeks to strengthen the capacity for adaptation. It is also intended to support the Agroenvironment Unit of SAG in the implementation of Agroclimatic Committees based on the experience of Colombia that was promoted by CIAT/CCAFS. Likewise, based on the experiences developed in Costa Rica and Colombia, provide support with methodologies for design of coffee and livestock NAMA's.

Results: - A research proposal called Climate and Food Security was presented and accepted, activities will begin at the central level and at two locations in the dry corridor of Honduras. - The historical work carried out on socioeconomic scenarios will be recognized as an important contribution to the design of policy documents such as National Strategy for Adaptation to Climate Change in the Agri-Food Sector. Thanks to the articulated work between Environment Climate Change Unit (UACC&GR) and CIAT/CCAFS. - CIAT / CCAFS developed and proposed a methodological training plan on climate change and agriculture that will be applied at the regional level within the framework of Agroclimatic Technical Committees in 2017.

Partners: Honduras Agriculture and Livestock Secretary (SAG), Unidad de Agroambiente, Cambio Climático & Gestion del Riesgo Dirección de Ciencia y Tecnología Agropecuaria (DICTA) Comisión Permanente de Contingencia (COPECO)

Links / Sources for further information: https://youtu.be/hbb-V5_qqcl
<https://drive.google.com/open?id=0B8sz3X0Nn63VQ1VnWWRZVUN3UDg>

Project highlight 227

Title: Four policies and strategies across LAM have considered gender aspects

Author: Tatiana Gumucio

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Gender and social inclusion
- Innovative non-research partnerships
- Inter-center collaboration

Is global: No

Start date: Jan 2015

End date: Jun 2016

Keywords: gender, climate change, agriculture, policymaking

Countries: Peru, Honduras, Colombia

Highlight description: Over the course of the project, the CIAT-gender group has engaged with Ministries of Agriculture and of the Environment in Peru, Colombia, and Honduras on integrating gender in four key policies on climate change adaptation, via partnership-building and coordination with organizations internal and external to CCAFS.

Introduction / Objectives: Support policymakers to include gender considerations significantly in policies and strategies on climate change adaptation.

Results: The CIAT-gender group: a) worked with the IUCN, CIP-Peru, and ICRAF-Peru to submit gender inputs to a draft of Peru's Climate Change Gender Action Plan, led by its Ministry of the Environment; collaborated with CCAFS LAM to provide inputs to the b) Honduras National Climate Change Adaptation Strategy for the Agri-Food Sector and to c) Colombia's Roadmap for the Development of Adaptation Plans; and coordinated activities with Colombia's Ministry of the Environment to provide gender inputs to d) Colombia's Adaptation based in communities Methodological Guide.

Partners: CCAFS Latin America team, Peru Ministry of the Environment, ICRAF, CIP, Colombia Ministry of the Environment and Sustainable Development, Colombia National Planning Department, Honduras Secretary of Agriculture, IUCN

Links / Sources for further information: <Not Defined>

Project highlight 228

Title: CIAT/CCAFS contributes gender research to USAID Webinar for over 190 practitioners and researchers from Peru and Colombia.

Author: Tatiana Gumucio

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Gender and social inclusion
- Successful communications
- Capacity enhancement

Is global: No

Start date: Sep 2016

End date: Sep 2016

Keywords: gender, climate change, agriculture, policymaking

Countries: Peru, Colombia

Highlight description: CIAT/CCAFS gender specialists were invited to participate as the panelists in a webinar led by the USAID Project for Adaptation and Resilience-Water (Proyecto PARA-Agua) on November 29, 2016. Entitled "Gender and Climate Change from a research perspective," the webinar served as the introduction to the series "Communication of Scientific Information to Decision-makers," with a focus on Peru and Colombia. The CIAT/CCAFS presentations highlighted results from the CCAFS gender household survey from the Cauca, Colombia, Climate-Smart Village.

Introduction / Objectives: Build the capacity of decision-makers in Colombia and Peru to incorporate gender considerations in their research, interventions, and policymaking related to climate change, through effective communication of CCAFS LAM gender research results.

Results: Over 190 individuals from Peru and Colombia participated in the webinar. The webinar coordinators reported significant interest and change in awareness towards gender and climate change issues among the audience, given participant attendance and comments posted. Consequently, the PARA-Agua project is planning more webinars on this theme.

Partners: AECOM International Development, USAID, CIAT/CCAFS

Links / Sources for further information:

<http://www.para-agua.net/conectar/eventos/elemento/141-genero-y-cambio-climatico-desde-la-perspectiva-investigativa>

Project highlight 250

Title: CIAT/CCAFS LAM/FTA coordinates event with nine academic, bilateral, rural development, and producer organizations in Nicaragua to discuss gender household survey results from Tuma la Dalia Climate-Smart Village



Author: Tatiana Gumucio

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Gender and social inclusion
- Innovative non-research partnerships

Is global: No

Start date: Jul 2016

End date: Sep 2016

Keywords: gender, climate smart agriculture

Countries: Nicaragua

Highlight description: CIAT/CCAFS gender group with partners FTA and Nicaraguan NGO the Foundation for Agricultural and Forestry Technological Development (FUNICA) disseminated and discussed results from comprehensive household survey carried out in the Tuma la Dalia, Nicaragua, Climate Smart Village in 2015, through a workshop with nine key institutions representing diverse research and development interests in the region.

Introduction / Objectives: Engage with major national actors in the fields of agriculture, food security and rural development to solicit their feedback on initial findings from CCAFS gender household survey carried out in the Tuma la Dalia CSV; facilitate dialogue on next gender-sensitive studies or interventions that could be proposed, based on the information collected.

Results: The convened organizations committed to carrying out a similar meeting themselves with Tuma la Dalia CSV representatives on site to discuss survey results. Nine organizations participated in the event and provided feedback, having reviewed the draft survey report beforehand. Participants expressed the need to continue working on themes related to gender and climate change in a concerted manner, and discussed the importance of carrying out similar data collection in other parts of Nicaragua vulnerable to climate change, particularly the dry corridor.

Partners: CATIE, CRS, Heifer International, World Bank, Foundation for Agricultural and Forestry Technological Development (FUNICA), National Union of Agricultural and Livestock Producers (UNAG),

Catholic University of the Estelí Dry Tropic (UCATSE), University of Commercial Sciences (UCC)

Links / Sources for further information: See workshop report "Memoria Taller FUNICA CIAT Septiembre 2016"

6. Activities

A6 - Support development and implementation of the coffee and livestock NAMA in Costa Rica

Description: Costa Rica is currently working on 2 NAMAs of which the coffee NAMA is the most advanced, the livestock NAMA under conceptualization. Costa Rica is probably the most advanced country in terms of agricultural NAMA in LAM, and also globally. Furthermore is Costa Rica part of the Latin American Platform on Climate Change, which mission is to generate answers, from and for Latin America, for the global problem of climate change. Costa Rica is the ideal platform to showcase and share the NAMA experiences to the LAPC members and for LAPC to showcase and inform advances on NAMA globally.

Start date: Mar 2014

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Laderach, Peter
<p.laderach@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: Science: peer reviewed paper produced: 1. Impact of CC on Ag in CA 2. Impact of CC on bean and maize system in CA 3. Impact of CC on coffee quality and production 4. Identification of CSA livestock systems 5. Trade-off analysis among CSA in livestock systems 6. Climate modeling overview for Ag in CA 7. Impact of CC on coffee pest and disease and concept to address issues Engagement: Two MAG based staff are very effective in liaison between science provider and NAMA stakeholders. All initiatives supporting NAMA are now well coordinated and complementing each other smoothly. NAMA specifically: Coffee NAMA being implemented based on tailored CIAT science on carbon assessments and CSA for targeting interventions. Livestock NAMA pilot based on CIAT science. Very detailed proposal including MRV developed for submission to donor.

Deliverables in this activity:

- D2132: Lessons learned of pilot NAMA Livestock Plan implementation
- D2133: Coffee carbon stock, foot print and exposure to climate change by coffee growing region
- D2132: Lessons learned of pilot NAMA Livestock Plan implementation
- D2133: Coffee carbon stock, foot print and exposure to climate change by coffee growing region
- D1434: Climate-Smart Livestock Systems: An Assessment of Carbon Stocks and GHG Emissions in Nicaragua
- D1522: A bitter cup: climate change profile of global production of Arabica and Robusta coffee
- D1521: Multiclass Classification of Agro-Ecological Zones for Arabica Coffee
- D1523: Projected Shifts in Coffea arabica Suitability among Major Global Producing Regions Due to Climate Change
- D1435: Almacenamiento de carbono en sistemas agro-forestales con cafe en Costa Rica
- D2715: Climate change adaptation of coffee production in space and time
- D2716: Prioritizing climate-s

A29 - Influencing gender-inclusive climate change policies for Latin American countries.

Description: Gender blind policies (i.e. those that do not explicitly consider gender issues) can often have unintended negative consequences for women. Thus, this activity will evaluate the current status of gender in climate change-related policies of several Latin American countries and provide recommendations for how to include gender

Start date: Mar 2014

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Twyman, Jennifer
<j.twyman@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: We have focused on capacity-building and engagement with next users via webinars and bulletins, instead of in-person workshops, in order to make the most of limited resources. Furthermore, through these initiatives, we have sought to more widely and actively disseminate and engage next users with the knowledge developed over the course of the project. We have also sought to identify nearby partners working on issues of gender-inclusive climate change policymaking processes, in order to capitalize on complementarities, for example through the workshop carried out in Colombia this year.

Deliverables in this activity:

- D2128: Working Paper on Methodology for influencing gender-inclusive policymaking on climate change.
- D2129: Women's role in agroforestry, to inform effective climate change strategies and policies in Latin America
- D2129: Women's role in agroforestry, to inform effective climate change strategies and policies in Latin America
- D2128: Working Paper on Methodology for influencing gender-inclusive policymaking on climate change.
- D1855: Gender and CC bulletins
- D1856: Panelist/presentation in Gender Network/CCAFS Webinar: Gender considerations in today's post COP 21 environment; what's missing?
- D1857: Panelist/presentation in GGCA Webinar: Implementing the Paris COP21 Agreement: Gender-Responsive Solutions and Changing Behaviors
- D1858: Shared FTA / CCAFS: Gender agroforestry LAM webinar presentation for policymakers and rural development organizations
- D1859: Bogota, National Agroclimatic Committee
-

A392 - (BILATERAL) Project with the Colombian Ministry of Agriculture (MADR) on Climate Change and Agriculture

Description: The detailed activities of the project will only be defined in January each year but the bilateral aligned to this project will contribute to the field work and measurement that support the development of the NAMA's and the NAP.

Start date: Mar 2014

End date: Dec 2016

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Laderach, Peter
<p.laderach@cgiar.org>

Status: Complete

Overall activity or progress made during this cycle: <Not Defined>

Deliverables in this activity:

- D354: Methodology for regional policy engagement process and workshops

A731 - Evidence based design of climate policies for Honduras

Description: A CIAT/CCAFS person is being seconded to the Climate Change Agro-Environment and Food Security Unit of the Ministry of Agriculture and Livestock of Honduras (SAG) to support the development of a livestock NAMA, a Participatory Agroclimatic Technical committees, the design of the National Climate Change Strategy and the sub-sector NAP. Experiences from Colombia and Costa Rica are being used as the bases transfer knowledge and capacities in Honduras.

Start date: Aug 0102

End date: Aug 3113

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Tapasco, Jeimar
<j.tapasco@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: In January 2016, a workshop was held with different institutions in Honduras related to the agricultural sector, including SAG, DICTA, IHCAFE, FHIA and FIPAH. The objective was to carry out a diagnosis and prioritize research activities and activities to support the state for management of climatic risks. Three proposals were prepared each for UNDP, USAID and for the US Department of State through TNC. The research asociate Diego Obando from CIAT Colombia moved to Tegucigalpa to support these activities and in general the Agroenvironment Climate Change and the Risk Management Unit of SAG. CIAT/CCAFS supported to the policy document and strategic planning of the regional agro-climatic committee of the department of Intibucá, this documents will be used in 2017 as an example for the establishment of 5 more agroclimatic committes.

Deliverables in this activity:

- D2131: Training workshop for SAG technicians in relevant CIAT / CCAFS
- D2130: Draft policy documents

7. Leverages

No leverages added

Title: LivestockPlus: Supporting low emissions development planning in the Latin American cattle sector

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2018	RP LAM	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2, Bilateral	On-going	CIAT - Centro Internacional de Agricultura Tropical - Colombia	Arango, Jacobo <j.arango@cgiar.org>

Project is working on

Flaship(s)
F3 (Lini): Low emissions development

Region(s)
LAM: Latin America

Project summary

The LivestockPlus consortium will enable development and implementation of Nationally Appropriate Mitigation Actions (NAMAs) for low emissions pasture development in the cattle sector in Costa Rica and Colombia by providing technical support and critical information and guidelines necessary to identify the best available mitigation options and support planning and policies for the scaling up of NAMAs. The target countries, are at intermediate and beginning stages of developing NAMAs for the cattle sector, respectively and provide sites representative of larger areas of pasture systems in the region. LivestockPlus will use these two countries as pilots to provide information while at the same time developing research products applicable to the NAMA discussions regionally and globally. By 2018, policy makers will use the information generated by LivestockPlus to support low emission development (LED) policy and its implementation in the cattle sector.

2. Partners

Partner #1 (Leader)

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Tapasco, Jeimar <j.tapasco@cgiar.org>	Activity 2014-19 *Partner*. Activity 2014-20 *Leader*.	HQ
Partner	Chirinda, Ngonidzashe <n.chirinda@cgiar.org>	Activity 2014-17 *Leader*.	HQ
Project Leader	Arango, Jacobo <j.arango@cgiar.org>	Jacobo is the project coordinator and will be the project leader from 2017 on	HQ

Partner #2

Institution: ICRAF - World Agroforestry Centre

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Coordinator	Rosenstock, Todd <t.rosenstock@cgiar.org>	Consistent implementation of the SAMPLES approach; developing new methods of GHG measurement and MRV systems Activity 2014-17 *Partner*.	HQ

Partner #3

Institution: CATIE - Centro Agronómico Tropical de Investigación y Enseñanza

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Somarriba, Eduardo <esomarri@catie.ac.cr>	Activity 2014-17 *Partner*. Activity 2014-20 *Partner*. Activity 2014-19 *Leader*.	HQ

Partner #4

Institution: MAG - Ministerio de Agricultura

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Chacon, Mauricio <mchacon@mag.go.cr>	Activity 2014-17 *Partner*. Activity 2014-19 *Partner*. Activity 2014-20 *Partner*.	HQ

Partner #5

Institution: UNICAUCA - Universidad del Cauca

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Vivas, Nelson <nvivas@gmail.com>	Activity 2014-17 *Partner*. Activity 2014-19 *Partner*.	HQ

Partner #6

Institution: UNAL - Universidad Nacional de Colombia

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Barahona Rosales, Rolando <rbarahonar@unal.edu.co>	Activity 2014-17 *Partner*. Activity 2014-19 *Partner*. Activity 2014-20 *Partner*.	Medellin, Colombia

Partner #7

Institution: Unillanos - Universidad de los Llanos

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Plazas, Camilo <cplazas1@hotmail.com>	Activity 2014-17 *Partner*. Activity 2014-19 *Partner*. Activity 2014-20 *Partner*.	HQ

Partner #8

Institution: INTA - Instituto Nacional de Innovación y Transferencia en Tecnología Agropecuaria

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Abarca, Sergio <sabarca@inta.go.cr>	GHG measurements and calculation of emission factors	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	One way of keeping the morale in the team high has been through engaging and involving the partners in resource mobilization efforts i.e., applications for new grants. Therefore, project partners jointly evolve and co-generate fund raising ideas aligned with the project

Partnerships overall over the last reporting period:

Despite several budget reductions experienced, we have been able to maintain partners aligned with the project towards achieving expected outputs and outcomes. Partners fully recognize the importance and high relevance of the project towards the NDC goals set by governments in the last COP meeting in Paris.

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Province	4.0471	-73.571	Meta-Piedmonte
Province	4.1209	-72.8569	Meta-Altilanura
Province	1.9982	-77.1224	Cauca-Patia
Province	10.3979	-85.5928	Chorotega
Province	10.3642	-84.35	Huetar Norte

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:

Stakeholders in Costa Rica and Colombia have requested that the LivestockPlus consortium supports ongoing objectives related to the mitigation of GHG emissions. However, there are many obstacles that impede the development of programs that will actually achieve robust, verifiable and equitable mitigation actions. To overcome these obstacles and support the transition to more efficient and low emitting cattle systems, LivestockPlus will engage national ministries and agencies, donors, the private sector and local research institutions to jointly develop a research agenda and generate research outputs providing the critical information required for NAMAs. Research results from LivestockPlus are relevant to pasture areas of up to 350 million ha in Savanna and Hillside agro-ecosystems (i.e. excluding the Amazon). Nonetheless, in this project our aim is to influence a total area of 1.1 million hectares that is 0.6 million hectares in Colombia and 0.5 million hectares in Costa Rica.

Annual progress towards outcome (end of 2016*): ? Documentation of strengthened multiple stakeholder platforms and collected socioeconomic and biophysical baseline data. ? Initial data on GHG emissions will be available to inform NAMAs. ? Differences between GHG balances among different pasture production systems evaluated through LCAs in Colombia. ? Challenges and opportunities for developing livestock-based NAMAs in the selected countries identified.

Annual progress towards project outcome in the current reporting cycle (2016*): The LivestockPlus team has made significant progress towards delivering their 2016 targets: ? More than 500 farm surveys were made to obtain information regarding socioeconomic and biophysical baseline data both in Colombia and Costa Rica. ? Field experiments and laboratory assays were conducted to generate data on GHG emissions. ? Generated data, which is informing NAMA development, has been published in peer reviewed publications, info notes and also presentations at congresses and stakeholder meetings. ? The project has one PhD student devoted to investigating differences between GHG balances among different livestock production systems in more than 10 departments of through of Colombia using the LCA approach (He is using data collected through the LivestockPlus project and also data collected by the livestock producers association- FEDEGAN. ? At total of four info notes and one scoping report were written in 2016. These info notes covered several topics on the policy and technical challenges and opportunities for developing livestock-based NAMAs in Colombia and Costa Rica and identifying gender roles along the livestock value chain. ? A peer reviewed paper has been published in PlosONE as a first evaluation for GHG emissions from livestock systems in Nicaragua. For the project team this represented an initial exploration on the possibilities of a future NAMA in a country where adaptation to changing climatic conditions and improving food security are the most important national priorities. ? The project team has been active in fundraising efforts to complement/cover the original planned activities including participation in national and international project calls. ? A new staff member was added to theLivestockPlus team - Diksha Arora. She is gender PostDoc Fellow; funded through the support of the CGIAR Gender Network. Dr. Arora has been focusing on intra-household dynamics and gender relations in the livestock sectors of Colombia and Costa Rica.

How communication and engagement activities have contributed to achieving your Project outcomes:

* Engagement and communication activities have been organized by the project coordinator and included in project meetings, participation in national and international congresses, blogs and interviews including one in the NPR of USA

(<http://www.npr.org/sections/thesalt/2017/02/13/514070632/to-save-the-planet-give-cows-better-pasture>). This information have been included in the project deliverables and project highlights sections.

Evidence documents of progress towards outcomes: * <Not Defined>

Annual progress towards outcome (end of 2015): ? Scoping meetings conducted to set the research agenda and outline project engagement strategies with partners in the two focus countries (Colombia and Costa Rica). ? Multi-stakeholder platforms strengthened in Colombia and Costa Rica. ? Data on cattle production systems (type, state, management and distribution) compiled and collected by conducting baseline surveys in the two focal countries. ? In the two focal countries data collected on socioeconomic and biophysical components of cattle systems (including gender-disaggregated data). ? Feasibility and robustness of methodological options for monitoring, reporting and verification of enteric methane emission reductions in cattle production systems assessed through a review study. ? Two multi-stakeholder workshops (one in each of the target countries) conducted to take stock of variables that are routinely collected by cattle related enterprises of agencies and evaluate their relevance for emissions monitoring. ? LivestockPlus consortium contributes scientific information related to pasture management and measurements on greenhouse gas emissions that will be used in the NAMA application on cattle production in Costa Rica which will be submitted to a NAMA funding agency.

Annual progress towards outcome (end of 2017): ? Identification and testing of proxies for enteric methane emission - Mitigation options for cattle systems in Colombia identified (field measurements, modelling). ? Article on LCA of cattle systems in Costa Rica and Colombia ? MAC curves. ? Methods for MRV in pasture NAMAs documented and guidelines of SAMPLES for cattle production systems extended. ? Implementation of livestock NAMA is expected to start in Costa Rica. ? Information generated from action areas will inform mitigation opportunities and Colombia's NAMA formulation.

Annual progress towards outcome (end of 2018): ? Opportunities and challenges in use of MRV on cattle sector evaluated. ? Low cost MRV system in place for Livestock NAMA in the two target countries. ? NAMA application from Colombia. ? Training program materials developed to strengthen capacities in GHG research. ? Paper prepared on lessons learnt during the development of NAMAs from a policy perspective. ? Policy brief prepared to suggest instruments to increase adoption and upscaling of improved cattle production systems contributing to LED.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* We learnt the need to be resourceful if we are to achieve goals that are aligned with our theory of change. The work done in the previous cycle gave prominence to the importance of considering gender roles and existing time constraints at household level. In the next cycle we plan to further explore gender impacts of different mitigation options. This, we envisage, will accelerate the pace towards achieving change.

4.2 CCAFS Outcomes

RP LAM Outcome 2019: National governments formulate and implement NAMAS and LEDS based on improved data on smallholder agricultural GHG emissions and implement equitable policies to strengthen linkages among environment and agriculture in order to avoid deforestation from commodity agriculture, promote restoration to increase carbon sequestration and reduce GHG emissions from livestock and commodities. Research organizations generate improved data on smallholder agricultural GHG emissions. Local governments contribute to the development of NAMAS and LEDS action plans at local level.

Indicator #1: # of low emissions plans developed that have significant mitigation potential for 2025, i.e. will contribute to at least 5% GHG reduction or reach at least 10,000 farmers, including at least 10% women.

2019
<p>Target value: 2</p> <p>Cumulative target to date: 4</p> <p>Target narrative: Governmental organizations and the private sector will be using - in their Low Emission Development (LED) strategies -best-fit mitigation options identified by the LivestockPlus consortium. In addition, variables that are routinely collected by cattle related enterprises (milk quality, animal productivity, etc) will be evaluated for their relevance to act as proxies for emissions monitoring, reporting and verification in the developed NAMAs. The inclusive approach adopted in this project will enable exploration and/or development of feasible upscaling packages. Therefore, in 2015, a cattle NAMA for Costa Rica will be submitted to a NAMA funding agency and by 2019, if the NAMA is accepted, a NAMA implementation plan will be developed and subsequently implemented. On the other hand, in Colombia, by 2019, a NAMA on improved pastures for the cattle sector will be registered with UNFCCC.</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>
2015
<p>Target value: 1</p> <p>Cumulative target to date: 1</p> <p>Target narrative: In 2015 a Livestock NAMA for Costa Rica will be submitted to a NAMA financing agency. LivestockPlus consortium will contribute scientific information related to pasture management and measurements on greenhouse gas emissions that will inform implementation of the cattle NAMA in Costa Rica. This livestock NAMA will be a joint outcome with the CCAFS-FP4.</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2016

Target value: 1

Cumulative target to date: 2

Target achieved: 1.0

Target narrative: By 2016 the project will contribute towards creation of stakeholder platforms and the needed technical information for developing an outline of a NAMA application on improved pastures for the cattle sector of Colombia. Mitigation potential of different cattle production systems estimated in Costa Rica.

Narrative for your achieved targets, including evidence: Project team members are part of the Colombia (CO) and Costa Rica (CR) Livestock round-tables where they participate by providing technical expertise and inputs to the NAMA and now INDC process. Specifically, in both countries, project team members have provided inputs in the NAMA process in CR and NINO in CO. These policy instruments target reducing national GHG emissions, in CO and CR, by over 20%

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Field studies were conducted in CO and CR to assess gender roles across the livestock value chain. An info note on preliminary findings shows that the roles and responsibilities in the livestock sector are segregated along gender lines. Findings are being shared with relevant stakeholder to help inform policies that promote gender equality in the livestock sector. We now plan to undertake a quantitative study to acquire an more in-depth understanding of the links between gender roles and the adoption of effective mitigation options.

The expected annual gender and social inclusion contribution to this CCAFS outcome: The project will influence the NAMA to include aspects that promote equality at farm and across the livestock value chain.

Indicator #2: # millions of hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation

2019

Target value: 0.5 million hectares in Costa Rica 0.6 million hectares in Colombia

Cumulative target to date: Cannot be Calculated

Target narrative: By 2019, policy makers in Colombia and Costa Rica will be using the information generated by the LivestockPlus consortium to support low emission development (LED) policy and its implementation in the cattle sector. If successfully adopted, scaled up practices are estimated to reduce emissions by 10% and improve cattle productivity by 20% thus contributing towards both food security and climate change mitigation.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2015

Target value: 0.2 million hectares in Chorotega region in Costa Rica

Cumulative target to date: Cannot be Calculated

Target narrative: Research informed initiatives during NAMA implementation will lead to scaling up of low emission cattle systems in Chorotega region of Costa Rica.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 0.3

Cumulative target to date: Cannot be Calculated

Target achieved: 0.3

Target narrative: Research informed initiatives during NAMA implementation will lead to scaling up of low emission cattle systems in Huetar Norte region of Costa Rica.

Narrative for your achieved targets, including evidence: Data on enteric fermentation from different livestock systems in CR was collected and is available to inform NAMA implementation. Those data and more that will be collected, in 2017, will certainly inform NAMA implementation and opportunities to intensify livestock production and thus contribute towards preventing deforestation at national level. For example, in Colombia members of the LivestockPlus are participating in projects in the amazon region establishing silvopastoral systems (to enhance productivity and reduce emissions) in at least 50 lead farms with the aim of preserving the remaining forest lands.

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Through analyses of gender roles along the livestock value chain, the project team is now able to explore opportunities on how mitigation policies and actions contribute towards promoting equality and preventing farm level time poverty. For instance, from our data it is clear that policies that affect milk production and prices will disproportionately negatively affect women.

The expected annual gender and social inclusion contribution to this CCAFS outcome: The project will influence the NAMA to include aspects that promote equality at farm and across the livestock value chain.

Major Output groups:

- F3 (Lini): Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:

Activity 2014-19: Consultative processes with the cattle sector actors (e.g. Chamber of Commerce, Meat Commission, Cooperatives, and Association of producers) through the roundtables (in Costa Rica PITTA and Mesa Ganadera) will contribute towards the identification of opportunities and barriers for upscaling mitigation actions and the related MRV systems. Within this result capacity building for technicians will contribute to the impact of the other activities.

Collaborating with other CRPs

Livestock and Fish

Description of collaboration: A polytunnel was constructed; a Fourier transform infrared spectroscopy (FTIR)-gasmet-DX4040 gas analyzer purchased through collaboration with Livestock & Fish CRP. The GASMET instrument provides reliable GHG measurements with high precision and true multi-compound analysis capability. This combination of tools will enable us to test low-emission options and MRV techniques.

4.4 Case Studies

No case studies added

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

F3 (Lini): Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Major Output groups - 2016

F3 (Lini): Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

Collecting data on GHG balances including enteric fermentation, soil C stocks, and soil emissions will be done using low cost methods proposed through the SAMPLES programme; with modifications where necessary.

Brief summary of your actual 2016 contribution towards the selected MOG: The project team collected data from the constructed polytunnel using the traditional method (GC) and the new state-of-the-art GASMET equipment which gives data on GHG concentrations in real time. Results show a strong positive relationship between the two GHG quantification methods, thus the GASMET method was validated.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: The GHG balances will be related to livestock productivity and will be reported as emission intensities. The aim is to identify options that reduce GHG emissions without increasing gender and social inequalities.

Summary of the gender and social inclusion dimension of the 2016 outputs: Data to calculate emission intensities (GHG fluxes and weight gains) are available. We have insights on gender roles across the livestock value chain. The next step is to evaluate how promotion of different practices will reduce emissions and impact gender inequalities e.g., will pasture improvement affect gender roles?

Major Output groups - 2015

F3 (Lini): Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: A polytunnel was constructed and Fourier-transform-infrared-spectroscopy-(FTIR)-Gasmeter-DX4040 gas analyzer purchased (through collaboration with Livestock&Fish-CRP) that provides reliable GHG measurements with high precision and true multi-compound analysis capability. In Costa Rica, the project contributed funds to increase the coverage of INTA-CATIE-FONTAGRO project to measure GHG through SF6 methods.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: Colombia: baseline surveys conducted with some questions on gender that accounted for remunerated work. The aim is to complement available gender data with qualitative data in pilot farms from different regions in 2016. Costa Rica: a consultant for CCAFS-FP3 generated a report with recommendations for priority actions for gender research.

Major Output groups - 2014

F3 (Lini): Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

5.2 Deliverables

D2947 - Examining the gender dynamics in livestock production - What's missing?

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/73258>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Género en la ganadería: Consideraciones iniciales para la incorporación de una perspectiva de género en la investigación de la ganadería en Colombia y Costa Rica

Description / Abstract: Este documento se encuentra enmarcado en el proyecto LivestockPlus, que busca apoyar, desde distintas líneas investigativas, la planificación de diferentes acciones en el sector ganadero latinoamericano para reducir las emisiones de gases de efecto invernadero que éste genera, con un enfoque en Costa Rica y Colombia. LivestockPlus reconoce la importancia de tomar en cuenta consideraciones de género para contribuir a investigaciones relevantes y acciones exitosas para la mitigación. De acuerdo a esto, el propósito de este documento es revisar la literatura gris disponible sobre roles de género, control de recursos productivos y toma de decisiones en el sector ganadero en Colombia y Costa Rica. Tres temas claves surgen de la revisión, relacionados a: la invisibilización del trabajo de las mujeres en el sector ganadero; su acceso limitado a recursos productivos en comparación a los hombres; y una falta de datos relacionados a género y la producción ganadera en Colombia y Costa Rica. A pesar de la información limitada, resultados de la revisión sugieren que las mujeres en ambos países contribuyen significativamente a la producción ganadera por medio de su labor remunerada y no-remunerada. Las normas de género han influido que se considera la producción ganadera mayormente como la responsabilidad de los hombres y por esta razón, tienen principal control de activos claves como la tierra y el ganado, y mayor acceso a capacitaciones en comparación a las mujeres. Sin embargo, la revisión demuestra que las mujeres rurales han generado respuestas para enfrentar la desigualdad también. En particular, se recomienda rescatar estrategias

que las mujeres han implementado para mejorar su calidad de vida y la de sus familias. En general estas estrategias son consideradas menos rentables y reciben menos apoyo porque son de subsistencia. Algunos ejemplos son la ganadería menor y la producción avícola, o la producción de alimentos. Investigación más extensa de estos temas en Colombia y Costa Rica será importante para la formulación informada de programas de desarrollo y políticas en sus sectores ganaderos.

Publication / Creation date: 2016-05-01

Language: es

Country: COLOMBIA,COSTA RICA,NICARAGUA

Keywords: LIVESTOCK,GENDER,AGRICULTURE,CLIMATE CHANGE,FOOD SECURITY

Citation: Gumucio T, Mora Benard MA, Twyman J, Hernández Ceballos MC. 2016. Género en la ganadería: Consideraciones iniciales para la incorporación de una perspectiva de género en la investigación de la ganadería en Colombia y Costa Rica. Documento de trabajo CCAFS no. 159. Copenhague, Dinamarca: Programa de investigación de CGIAR en Cambio Climático, Agricultura y Seguridad Alimentaria (CCAFS).

Handle: <http://hdl.handle.net/10568/73258>

DOI: <Not Defined>

Creator / Authors:

- CGIAR Research Program on Climate Change, - Agriculture and Food Security
- Gumucio, - Tatiana
- Mora Benard, - María Alejandra
- Twyman, - Jennifer
- Hernández Ceballos MC, -

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Responsible

D2884 - Introduction to the SAMPLES Approach

Main Information

Type: Articles and Books

Subtype: Book (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

http://link.springer.com/chapter/10.1007/978-3-319-29794-1_1

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: 10.1007/978-3-319-29794-1_1

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Springer

Indicators for journal articles: • This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
ICRAF - World Agroforestry Centre	Rosenstock, Todd <t.rosenstock@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Chirinda, Ngonidzashe<n.chirinda@cgiar.org>	Other

D2949 - Data on GHG emissions from livestock production systems in Latin America

Main Information

Type: Data, models and tools

Subtype: Database/Dataset/Data documentation

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Dataverse (Harvard)

Dissemination URL:

<https://dataverse.harvard.edu/privateurl?token=55513d60-4fbf-4471-91d1-f3dcf675490d>

Open access: Yes

License adopted: OPEN_DATA

Deliverable Metadata

Disseminated title: Database on GHG experiments conducted under the LivestockPlus project

Description / Abstract: The database contains data collected from experiments conducted in different regions of Colombia (Meta, Atlántico, Casanare and Valle del Cauca). Specifically the data is on GHG emissions from urine and manure patches in grazed pastures and carbon stocks in representative pastures. In addition, there is data on enteric methane production. The collected data can be used as inputs for calculating national GHG emissions factors.

Publication / Creation date: 2017-03-01

Language: English and Spanish

Country: <Not Defined>

Keywords: Livestock, BNI, GHG emissions, Tropical forages, methane, Soils, Agrobiodiversity, Latin America and the Caribbean

Citation: <Not Defined>

Handle: <Not Defined>

DOI: doi:10.7910/DVN/IVYMG1

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F A I R**

Process of data quality assurance: • Yes, but not documented

Data dictionary: • Yes, but not documented

Are the tools used for data collection available: • Yes, but not documented

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Chirinda, Ngonidzashe <n.chirinda@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Other
ICRAF - World Agroforestry Centre	Rosenstock, Todd <t.rosenstock@cgiar.org>	Other

D2886 - Scaling Point and Plot Measurements of GHG Fluxes, Balances, and Intensities to Farms and Landscapes

Main Information

Type: Articles and Books

Subtype: Book (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

http://link.springer.com/chapter/10.1007/978-3-319-29794-1_9

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: 10.1007/978-3-319-29794-1_9

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Springer

Indicators for journal articles: • This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
ICRAF - World Agroforestry Centre	Rosenstock, Todd <t.rosenstock@cgiar.org>	Responsible

D2887 - SAMPLES Website

Main Information

Type: Outreach products

Subtype: Website

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

http://link.springer.com/chapter/10.1007/978-3-319-29794-1_9

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
ICRAF - World Agroforestry Centre	Rosenstock, Todd <t.rosenstock@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Chirinda, Ngonidzashe<n.chirinda@cgiar.org>	Other

D172 - Scoping report to set the research agenda and outlining project engagement/training strategy co-written with partners

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79961>

Open access: Yes

License adopted: CC_BY_NC_SA

Deliverable Metadata

Disseminated title: What's next for the Livestock NAMA in Costa Rica

Description / Abstract: Costa Rica's Livestock NAMA aims to address the largest rural livelihood and greenhouse gas emission source simultaneously. Public-private partnerships evaluate and co-develop the technical and institutional infrastructure needed to support the NAMA. Key components of NAMA development are on-track to operationalize the NAMA in 2017.

Publication / Creation date: 2016-04-01

Language: en

Country: Costa Rica

Keywords: Livestock, GHG, emissions, mitigation

Citation: Chacon, M., Segura, J., Jenkins A., Fallas M., Obando D., Villanueva D., Chacon A., Abarca S., Ordonez J., Farnworth C., Arango J., and Rosenstock, T. What's next for the Livestock NAMA in Costa Rica .CCAFS Info Note. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen (Denmark).

Handle: NA

DOI: NA

Creator / Authors:

- Chacón, - Mauricio
- Segura, - Jorge
- Jenkins, - Agripina

- Fallas, - Marco
- Villanueva, - Diego Obando Cristóbal
- Chacón, - Adriana
- Abarca, - Sergio
- Ordoñez, - Jenny C
- Farnworth, - Cathy Rozel
- Arango, - Jacobo
- Rosenstock, - Todd S

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
ICRAF - World Agroforestry Centre	Rosenstock, Todd <t.rosenstock@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Other
MAG - Ministerio de Agricultura	Chacon, Mauricio <mchacon@mag.go.cr>	Other

D173 - Info note outlining challenges and opportunities for developing livestock-based NAMAs in the target countries

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: 2017

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79953>

Open access: Yes

License adopted: CC_BY_NC_SA

Deliverable Metadata

Disseminated title: Retos y oportunidades para el desarrollo de la NAMA Ganadería en Colombia y Costa Rica

Description / Abstract: Colombia y Costa Rica, son países donde la ganadería ocupa un papel fundamental en la economía, genera empleos directos e indirectos y ocupa el 32% y 21% del territorio respectivamente. Desde la óptica ambiental contribuye a la conectividad biológica, y a la cobertura boscosa, pero también es un emisor importante de GEI En el marco de la Convención Marco de Cambio Climático y con el objetivo de lograr lo planteado en las NDC presentadas para el Acuerdo de París, ambos países se comprometieron a reducir sus emisiones provenientes de la actividad ganadera. Para alcanzar dicho reto, se comprometieron en el desarrollo de acciones nacionales de mitigaciones o NAMA, las cuales buscan transformar la ganadería incrementando los niveles de producción y mejorando los balances de carbono. LivestockPlus es una de las cuatro iniciativas estratégicas creadas en el Centro Internacional de Agricultura Tropical (CIAT) bajo la nueva estrategia del CIAT para el período 2014-2020. El objetivo de estos esfuerzos prospectivos y colaborativos es abrir nuevas vías para mejorar el desarrollo e impacto de la investigación del CGIAR. Específicamente busca promover una intensificación sostenible de la ganadería en los trópicos basada en el uso de los forrajes mejorados (Rao , et al., 2015) El proyecto LivestockPlus tiene el reto de apoyar, estudiar y probar a nivel de finca las estrategias que la NAMA plantea para alcanzar niveles de competitividad Sin embargo en el transcurso de la conceptualización y pilotaje de la NAMA, ambos países se han encontrado con retos y oportunidades. Es necesario superar las limitaciones y aprovechar las oportunidades que brinda el sector para alcanzar las metas de la ganadería en los dos países.

Publication / Creation date: 2017-02-16

Language: <Not Defined>

Country: Colombia

Keywords: <Not Defined>

Citation: Serna L, Escobar D, Tapasco J, Chirinda N, Arango J, Chacon M, Segura J, Villanueva C. 2017. Retos y oportunidades para el desarrollo de la NAMA Ganadería en Colombia y Costa Rica. CCAFS Info Note. Colombia: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: NA

DOI: NA

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

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CIAT - Centro Internacional de Agricultura Tropical	Tapasco, Jeimar <j.tapasco@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Other
CIAT - Centro Internacional de Agricultura Tropical	Chirinda, Ngonidzashe <n.chirinda@cgiar.org>	Other
MAG - Ministerio de Agricultura	Chacon, Mauricio <mchacon@mag.go.cr>	Other

D2937 - Biological nitrification inhibition by Brachiaria grasses mitigates soil nitrous oxide emissions from bovine urine patches

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://www.sciencedirect.com/science/article/pii/S003807171630270X>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Biological nitrification inhibition by Brachiaria grasses mitigates soil nitrous oxide emissions from bovine urine patches

Description / Abstract: We hypothesized that nitrate (NO₃) production and nitrous oxide (N₂O) emissions from urine patches deposited on soils under forage grasses with high BNI capacity are lower than those with forage grasses with low BNI capacity. This hypothesis was tested using field plots of two tropical forage grass cultivars, Brachiaria humidicola cv. Tully (BT) and interspecific Brachiaria hybrid cv. Mulato (BM) which, correspondingly, have high and low BNI capacity. Nitrification rates and amoA gene copy numbers of ammonia oxidizing archaea (AOA) and bacteria (AOB) in soils under the two forage grasses were quantified before and after urine and water (control) application, as well, an additional experiment was conducted to quantify denitrification potential. Moreover, soil N₂O emissions from simulated urine (0.123 kg N m²) and water patches were monitored over a 29-day period. Results showed a greater suppression of nitrification, denitrification and AOA abundance in soils under BT than those under BM. Positive relationships (p 0.05) existed between AOA and AOB abundance and NO₃ contents in soils under BM. Bovine urine resulted in higher cumulative N₂O fluxes from soils under BM (80 mg N₂O-N m²) compared to those under BT (32 mg N₂O-N m²). Consequently, N₂O emission factors were higher for soils under BM (0.07%) than under BT (0.00002%).

Publication / Creation date: 2017-01-01

Language: english

Country: Colombia

Keywords: Biological nitrification inhibition, Bovine urine patches, Brachiaria humidicola, Ammonia oxidizing bacteria and archaea, N₂O emission factor,

Citation: Byrnes R, Nùñez J, Arenas L, Rao I; Trujillo C; Alvarez C, Arango J; Rasche F, Chirinda N. 2017. Biological nitrification inhibition by Brachiaria grasses mitigates soil nitrous oxide emissions from bovine urine patches. *Soil Biology & Biochemistry* 107: 156-163.

Handle: peer reviewed paper

DOI: <http://dx.doi.org/10.1016/j.soilbio.2016.12.029>

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Soil Biology and Biochemistry (Elsevier)

Indicators for journal articles: • This journal article is an ISI publication

• This article have a co-author from a developing country National Agricultural Research System (NARS)

• This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • LIVESTOCK AND FISH

• CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Chirinda, Ngonidzashe <n.chirinda@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Other

D2777 - Methods for Measuring Greenhouse Gas Balances and Evaluating Mitigation Options in Smallholder Agriculture

Main Information

Type: Articles and Books

Subtype: Book (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: 2016

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://www.springer.com/gp/book/9783319297927>

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: 10.1007/978-3-319-29794-1

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Springer

Indicators for journal articles: • This article have a co-author from a developing country National Agricultural Research System (NARS)

• This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flags contribution: • CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
ICRAF - World Agroforestry Centre	Rosenstock, Todd <t.rosenstock@cgiar.org>	Responsible

D2938 - Climate-Smart Livestock Systems: An Assessment of Carbon Stocks and GHG Emissions in Nicaragua

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0167949>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate-Smart Livestock Systems: An Assessment of Carbon Stocks and GHG Emissions in Nicaragua

Description / Abstract: Livestock systems in the tropics can contribute to mitigate climate change by reducing greenhouse gas (GHG) emissions and increasing carbon accumulation. We quantified C stocks and GHG emissions of 30 dual-purpose cattle farms in Nicaragua using farm inventories and lifecycle analysis. Trees in silvo-pastoral systems were the main C stock aboveground (16 ± 24 Mg ha⁻¹), compared with adjacent secondary forests (43 Mg C ha⁻¹). We estimated that methane from enteric fermentation contributed 1.6 kg CO₂-eq., and nitrous oxide from excreta 0.4 kg CO₂-eq. per kg of milk produced. Seven farms that we classified as climate-smart agriculture (CSA) out of 16 farms had highest milk yields (6.2 kg cow⁻¹day⁻¹) and lowest emissions (1.7 kg CO₂-eq. per kg milk produced). Livestock on these farms had higher-quality diets, especially during the dry season, and manure was managed better. Increasing the numbers of CSA farms and improving CSA technology will require better enabling policy and incentives such as payments for ecosystem services.

Publication / Creation date: 2016-12-01

Language: english

Country: Nicaragua

Keywords: <Not Defined>

Citation: GaitaÃn L, LaÈderach P, Graefe S, Rao I, van der Hoek R (2016) Climate-Smart Livestock Systems: An Assessment of Carbon Stocks and GHG Emissions in Nicaragua. PLoS ONE 11(12): e0167949. doi:10.1371/journal.pone.0167949

Handle: journal article

DOI: 10.1371/journal.pone.0167949

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Plos ONE

Indicators for journal articles: • This journal article is an ISI publication

- This article have a co-author from a developing country National Agricultural Research System (NARS)
- This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • LIVESTOCK AND FISH

- CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Responsible
CATIE - Centro Agronómico Tropical de Investigación y Enseñanza	Somarriba, Eduardo<esomarri@catie.ac.cr>	Other

D2778 - Evaluating fire severity in Sudanian ecosystems of Burkina Faso using Landsat 8 satellite images

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/79178>

Open access: No

Open access restriction: Not Disseminated

License adopted: No

Deliverable Metadata

Disseminated title: Evaluating fire severity in Sudanian ecosystems of Burkina Faso using Landsat 8 satellite images

Description / Abstract: The fire severity of the 2013–2014 fire season within Sudanian ecosystems in Burkina Faso was evaluated from Landsat 8 images using derivatives of the Normalized Burn Ratio algorithm (NBR). The relationship between the image-derived severity and the field observed severity i.e. Composite Burn Index (CBI) was best described by a nonlinear model of the form $y = a + b \cdot \text{EXP}(CBI \cdot c)$ ($R^2 = 0.66$). Classification of the image-derived burned area into burn severity classes achieved a classification Kappa accuracy statistic of 0.56. Highly severely burned areas were mapped with the highest accuracy (user's accuracy 77%, producer's accuracy 86%). The severity of the burn varied across phyto-geographical zones, protected status, land cover regimes, and forest management practices. The south Sudanian zone burned with a higher severity (low = 7%, moderate = 16% and high = 13%) than the north Sudanian zone (low = 5%, moderate = 10% and high = 5%). The mean of the highly severely burned areas differed significantly among the forest management practices ($P = 0.005$). A pair-wise comparison of the severity mean area indicated that the highly burned areas within forests managed for wildlife purposes differed significantly with that of both forests under the joint management ($P = 0.006$) and those under no management ($P = 0.024$). Among the management practices, forests jointly managed by the local communities and the government had the highest unburned area and the least highly severely burned areas reflecting the impacts of bottom-up forestry management where the local communities are actively involved in the management.

Publication / Creation date: 2017-01-01

Language: en

Country: BURKINA FASO

Keywords: ENVIRONMENT,FORESTRY

Citation: Musyimi, Z., Said, M.Y., Zida, D., Rosenstock, T.S., Udelhoven, T., Savadogo, P., Leeuw, J. de and Aynekulu, E. 2017. Evaluating fire severity in Sudanian ecosystems of Burkina Faso using Landsat 8 satellite images. Journal of Arid Environments 139: 95–109.

Handle: <http://hdl.handle.net/10568/79178>

DOI: <http://dx.doi.org/10.1016/j.jaridenv.2016.11.005>

Creator / Authors:

- Musyimi, - Z.
- Said, - Mohammed Yahya
- Zida, - D.
- Rosenstock, - Todd S.
- Udelhoven, - T.
- Savadogo, - P.
- de Leeuw, - Jan
- Aynekulu, - E.

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Journal of the Arid Environment

Indicators for journal articles: • This journal article is an ISI publication

• This article have a co-author from a developing country National Agricultural Research System (NARS)

• This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
ICRAF - World Agroforestry Centre	Rosenstock, Todd <t.rosenstock@cgiar.org>	Responsible

D123 - Socioeconomic components including gender roles in livestock production in Colombia

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/79940>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gender [im]balance in productive and reproductive labor among livestock producers in Colombia: Implications for climate change responses

Description / Abstract: Roles and responsibilities in livestock production and household maintenance are segregated along gender lines. Men's and women's participation in the livestock sector varies by tasks. Women combine livestock production, particularly, milk processing activities with the responsibility of household and care work. ? Men's and women's indirect contribution with regard to maintenance of the household and care provision to family members is also crucial for healthy and smooth functioning of livestock productive activities and therefore, must be accounted for in policy decisions, including those related to changing climate. ? As a response to climate change induced drought, men, and particularly women, are investing their labor in alternative sources of income to pay for water provision services to meet the water demands of their animals. For women who already face the double burden of productive and reproductive work, this coping mechanism may deepen their time poverty.

Publication / Creation date: 2017-02-01

Language: en

Country: COLOMBIA

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Arora D, Arango J, Burkart S, Chirinda N, Twyman J. 2017. Gender [im]balance in productive and reproductive labor among livestock producers in Colombia: Implications for climate change responses. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79940>

DOI: NA

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Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Tapasco, Jeimar <j.tapasco@cgiar.org>	Other
CATIE - Centro Agronómico Tropical de Investigación y Enseñanza	Somarriba, Eduardo <esomarri@catie.ac.cr>	Other

D2939 - Prioritizing climate-smart livestock technologies in rural Tanzania: A minimum data approach

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://www.sciencedirect.com/science/article/pii/S0308521X16302189>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Prioritizing climate-smart livestock technologies in rural Tanzania: A minimum data approach

Description / Abstract: Crop-livestock production systems play an important role in the livelihoods of many rural communities in sub-Saharan Africa (SSA) but are vulnerable to the adverse impacts of climate change. Understanding which farming options will give the highest return on investment in light of climate change is critical information for decision-making. While there is continued investment in testing adaptation options using on-farm experiments, simulation models remain important tools for 'ex-ante' assessments of the impacts of proposed climate-smart agricultural technologies (CSA). This study used the Ruminant model and the Trade-offs Analysis model for Multi-Dimensional Impact Assessment (TOA-MD) to assess how improved livestock management options affect the three pillars of CSA: increased productivity, improved food security, and reduced greenhouse gas (GHG) emissions. Our sample was stratified into: 1) households with local cow breeds (n = 28); 2) households with improved dairy cow breeds (n = 70); and 3) households without dairy cows (n = 66). Results showed that the predicted adoption rates for improved livestock feeding among households with improved dairy cows (stratum 2) were likely to be higher compared to households with only local cows (stratum 1). Both households with local cows and those with improved cows had increased income and food security. However, overall poverty reduction was only modest for households with local cows. Expected methane emissions intensity declined with adoption of improved livestock feeding strategies both in stratum 1 and stratum 2, and greater impacts were observed when households in stratum 2 received an additional improved cow breed. Providing a cow to households that were not keeping cows showed substantial economic gains. Additional research is, however, needed to understand why those farms currently do not have cows, which may determine if the predicted adoption rates are

feasible

Publication / Creation date: 2017-01-01

Language: english

Country: Tanzania

Keywords: Trade-off analysis; Crop-livestock systems; Tanzania; Ruminant model; Climate-smart agriculture; Food security

Citation: Shikuku, K.M., et al., Prioritizing climate-smart livestock technologies in rural Tanzania: A minimum data approach, Agricultural Systems (2016)

Handle: NA

DOI: <http://dx.doi.org/10.1016/j.agsy.2016.06.004>

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Agricultural Systems (Elsevier)

Indicators for journal articles: • This journal article is an ISI publication

• This article have a co-author from a developing country National Agricultural Research System (NARS)

• This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • LIVESTOCK AND FISH

• CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Responsible

D2779 - Limits of agricultural GHG calculators to predict soil N₂O and CH₄ fluxes in tropical agriculture

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://www.nature.com/articles/srep26279>

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: doi:10.1038/srep26279

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Scientific Reports

Indicators for journal articles: • This journal article is an ISI publication

• This article have a co-author from a developing country National Agricultural Research System (NARS)

• This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flagships contribution: • CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: F A I R

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CIAT - Centro Internacional de Agricultura Tropical	Chirinda, Ngonidzashe<n.chirinda@cgiar.org>	Other

D124 - MAC curves integrating biophysical and socioeconomic data based on secondary data (CATIE)

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79952>

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Elaboration of MACC curves for livestock NAMA technologies in Costa Rica

Description / Abstract: En el marco del proyecto Livestock Plus fueron desarrolladas curvas sobre costo marginal de abatimiento (curvas MACC) para las tecnologías que está promoviendo el NAMA Ganadería Costa Rica. A partir de fuentes secundarias se recopilieron los costos de establecimiento y manejo de algunas tecnologías priorizadas por el NAMA ganadería, en este caso enfocadas a las regiones de trabajo del proyecto que son las regiones Chorotega y Huetar Norte. En la primera el sistema de producción de carne – cría y en la segunda el sistema doble propósito. Para ambas regiones, las tecnologías abordadas fueron: 1. Pastoreo racional de pasturas mejoradas, 2. Pastoreo racional de pasturas mejoradas y cercas vivas maderables, 3. Pastoreo racional de pasturas mejoradas, cercas vivas maderables y árboles dispersos en potreros como parte de la regeneración natural.

Publication / Creation date: 2017-02-016

Language: Español

Country: Costa Rica

Keywords: Curvas MACC

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
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CATIE - Centro Agronómico Tropical de Investigación y Enseñanza	Somarriba, Eduardo <esomarri@catie.ac.cr>	Other

D2780 - Greenhouse gas fluxes from agricultural soils of Kenya and Tanzania

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://onlinelibrary.wiley.com/doi/10.1002/2016JG003341/full>

Open access: No

Open access restriction: Limited Exclusivity Agreements

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: DOI: 10.1002/2016JG003341

Creator / Authors: <Not Defined>

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Journal of Geophysical Research - Biogeosciences

Indicators for journal articles: • This journal article is an ISI publication

• This article have a co-author based in an Earth System Science-related academic department

Publication acknowledge: Yes

Flags contribution: • CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
ICRAF - World Agroforestry Centre	Rosenstock, Todd <t.rosenstock@cgiar.org>	Responsible

D93 - Info note on differences between GHG balance among improved pasture or silvopastoral (including LCA)

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79950>

Open access: Yes

License adopted: CC_BY_NC_SA

Deliverable Metadata

Disseminated title: Iniciativas de mitigación al cambio climático en sistemas de producción de carne bovina en países tropicales

Description / Abstract: La producción ganadera se basa principalmente en el uso de sistemas extensivos de pastoreo, el cual es un sistema ineficiente que genera niveles bajos de rentabilidad y por ende altas emisiones por unidad de producto. La ganadería de carne a nivel mundial, es el Sistema de producción que mayores emisiones de gases de efecto invernadero genera por unidad de producto. Los socios gramínea-leguminosa forrajeras pueden generar una reducción significativa sobre las emisiones de metano (CH₄) provenientes de parches de estiércol y sobre las emisiones de CH₄ entérico. La implementación de sistemas silvopastoriles al igual que la restauración de pasturas degradadas y la inclusión de pasturas mejoradas, surgen como mecanismos promisorios de reducción de emisiones (acciones nacionales de mitigación) para la ganadería de carne en Colombia.

Publication / Creation date: 2016-12-01

Language: spanish

Country: Colombia

Keywords: Livestock, mitigation strategies, improved forages

Citation: Durango S, Gaviria X, Gonzalez R, Sotelo Mauricio, Gutierrez Jhon, Chirinda N, Arango J, Barahona R. 2017. Iniciativas de mitigación al cambio climático en sistemas de producción de carne bovina en países tropicales. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

Handle: NA

DOI: NA

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
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CIAT - Centro Internacional de Agricultura Tropical	Arango, Jacobo <j.arango@cgiar.org>	Other
CIAT - Centro Internacional de Agricultura Tropical	Chirinda, Ngonidzashe <n.chirinda@cgiar.org>	Other

5.3 Project Highlights

Project highlight 146	
Title: LivestockPlus engagement with relevant stakeholders in Costa Rica and Colombia	
Author: LivestockPlus team	Subject: Stakeholder engagement
Publisher: LivestockPlus team	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Participatory action research • Policy engagement 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords: Livestock, NAMA, GHG, emissions, GHG, mitigation	Countries: Costa Rica, Colombia
Highlight description: The LivestockPlus team is actively participating in different scenarios in Costa Rica and Colombia related with livestock GHG emission reductions (e.g. sustainable livestock round tables in Colombia and Costa Rica).	
Introduction / Objectives: The LivestockPlus project have been able to contribute to the formation of Livestock roundtables both in Colombia and Costa Rica. Members of the project are actively participating in the technical meetings related in activities to influence enable policies to reduce GHG emissions and at the same time increase productivity to towards enhancing livelihoods. A file was created as evidence but the MARLO system is no taking it.	
Results: As a result of the active participation of the project members, we are leading the technical components of the round tables (CATIE in Costa Rica and CIAT in Colombia). Additionally the component dedicated to markets is leaded by CIAT in Colombia.	
Partners: Ministerio de Agricultura y desarrollo Rural (MADR) Instituto de Hidrología, Meteorología y Estudios Ambientales (IDEAM) Universidad Nacional de Colombia sede Bogotá Universidad Nacional de Colombia sede Medellín Centro Internacional de Agricultura Tropical (CIAT) Corporación Colombiana de Investigación Agropecuaria (CORPOICA) Organización de las Naciones Unidas para la alimentación y la agricultura (FAO) Unidad de planificación Rural Agropecuaria (UPRA) MAG (Costa Rica) CORFOGA CATIE INTA	
Links / Sources for further information: https://www.dropbox.com/s/qe358wg1o25zner/LivestockPlus%20engagement%20with%20Stakeholders%202017.pdf?dl=0 https://docs.google.com/viewerng/viewer?url=http://media.wix.com/ugd/91d711_3174571d87b3406b6959f486acdd8d34.pdf http://mesaganaderiasoste.wixsite.com/principal	

Project highlight 214

Title: Curso de evaluación de proyectos de desarrollo en entorno climático, con énfasis en curvas MACC



Author: CIAT-MAG-CATIE-CCAFS - CORFOGA

Subject: Capacidad instalada para los socios y no socios del proyecto

Publisher:

Year reported: 2016

Project highlights types:
• Capacity enhancement

Is global: No

Start date: Aug 2016

End date: Aug 2016

Keywords: MACC CURVES,

Countries: Costa Rica

Highlight description: El curso de Curvas de Costos Marginales de Abatimiento (MACC por sus siglas en inglés), fue dictado en la universidad de Costa Rica, edificio de educación continua, Ciudad universitaria Rodrigo Facio, San José, Costa Rica los días 22 al 25 de Agosto del año 2016. Este curso se desarrolló dentro del marco del proyecto livestock plus, atendiendo una solicitud del Ministerio de agricultura y ganadería (MAG), para apoyar el debate respecto a las acciones a efectuar frente al cambio climático, alternativas que contengan tanto un componente de sostenibilidad ambiental como socioeconómico, y una alternativa para evaluar y determinar la factibilidad de este tipo de acciones son las curvas de costos marginales de abatimiento. Se convocaron participantes de diferentes entidades tanto públicas como privadas y personas del sector educación (profesores y estudiantes) que cumplieran con el requisito de estar vinculados en temas de mitigación, producción pecuaria y/o cambio climático, esto con el fin de desarrollar capacidades locales en la mayor cantidad de personas, y que estas a futuro puedan transmitir el aprendizaje adquirido, implementando en la selección de las medidas, siendo esta una garantía para la efectiva consecución de metas relacionadas a la adaptación y mitigación.

Introduction / Objectives: El curso fue organizado por el CATIE, MAG, y dictado por profesionales del CIAT, el objetivo era relacionar al participante tanto con fundamentos socio-políticos como con evidencia empírica relacionada con la economía del cambio climático, permitiéndole comprender la racionalidad subyacente a la propuesta y diseño de acciones encaminadas a la adaptación y

mitigación del cambio climático.

Results: Al finalizar el curso, se lograron definir variables necesarias para el análisis de factibilidad financiera de proyectos ganaderos con enfoque en mitigación de emisiones, así como de líneas base de referencia, cada uno de los participantes construyó de forma apropiada curvas costo marginal de abatimiento de carbono, y sustentaron y argumentaron las mismas, encaminado al diseño de políticas públicas en el sector ganadero. Gracias a este curso, se lograron obtener las primeras curvas MACC para analizar las acciones propuestas por la NAMA de ganadería de Costa Rica. Se realizó un registro fotográfico de los participantes y expositores durante el curso, y al finalizar el curso se realizó una encuesta de satisfacción a los participantes, la calificación obtenida en su mayoría fue muy buena en todos los componentes que se evaluaron, temática, conferencista, organización y el curso como tal.

Partners: Ministerio de Agricultura y Ganadería (MAG) de Costa Rica Corporación Ganadera (CORFOGA) de Costa Rica Universidad Tecnológica Nacional (UTN) de Costa Rica Centro Agronómico Tropical de Investigación y enseñanza (CATIE) Universidad de Costa Rica (UCR) Escuela de Economía Agrícola y Agronegocios Instituto Nacional de Innovación y Transferencia en Tecnología Agropecuaria (INTA)

Links / Sources for further information: <http://hdl.handle.net/10568/79954>

Project highlight 230

Title: Biological nitrification inhibition by *Brachiaria* grasses mitigates soil nitrous oxide emissions from bovine urine patches



Soil Biology & Biochemistry
journal homepage: www.elsevier.com/locate/soilbio

Contents lists available at ScienceDirect

Soil Biology & Biochemistry

Biological nitrification inhibition by *Brachiaria* grasses mitigates soil nitrous oxide emissions from bovine urine patches

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ARTICLE INFO

Article history:
Received 22 September 2016
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Keywords:
Biological nitrification inhibition
Bovine urine patches
Brachiaria humidicola
Ammonia oxidizing bacteria and archaea
N₂O emission factor

ABSTRACT

High nitrogen (N) concentration in bovine urine, which generally exceeds plant N uptake rates, results in the formation of hotspots of N loss when bovine urine is deposited on grazed pasture soils. High spatial variability in the distribution of urine patches in grazed pastures poses a major challenge to mitigate N losses. Some ecotypes from the roots of several tropical forage grasses were shown to inhibit the activity of soil nitrifiers, a process known as biological nitrification inhibition (BNI). We hypothesized that nitrates (NO₃⁻) production and nitrous oxide (N₂O) emissions from urine patches deposited on soils under forage grasses with high BNI capacity are lower than those with forage grasses with low BNI capacity. This hypothesis was tested using field plots of two tropical forage grass cultivars, *Brachiaria humidicola* cv. Tully (BT) and interspecific *Brachiaria* hybrid cv. Mulato (BM) which correspondingly have high- and low-BNI capacity. Nitrification rates and *amoA* gene copy numbers of ammonia oxidizing archaea (AOA) and bacteria (AOB) in soils under the two forage grasses were quantified before and after urine and water (control) application, as well as additional experiment was conducted to quantify denitrification potential. Moreover, soil N₂O emissions from simulated urine (0.123 kg N m⁻²) and water patches were monitored over a 20-day period. Results showed a greater suppression of nitrification, denitrification and AOA abundance in soils under BT than those under BM. Positive relationships ($p < 0.05$) existed between AOA and AOB abundance and N₂O contents in soils under BM. However, no such relation in higher cumulative N₂O fluxes from soils under BM (80 mg N₂O-N m⁻²) compared to those under BT (32 mg N₂O-N m⁻²). Consequently, N₂O emission factors were higher for soils under BM (0.0075) than under BT (0.000029). We conclude that tropical forage grasses with high BNI capacity play a key role in mitigating N₂O emissions from bovine urine patches in archaea-dominated soils. This suggests that wide-spread adoption of tropical forage grasses with high BNI capacity may have a great potential to tighten N cycling in grazed pastures.

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1. Introduction

The atmospheric concentration of nitrous oxide (N₂O), a persistent greenhouse gas with a global warming potential 298 times higher than carbon dioxide (CO₂), is continuously increasing (Bartlett et al., 2013). Recent estimates show that, in 2014, average atmospheric N₂O levels (327.1 ± 0.1 ppb) were 121% higher than pre-industrial levels (World Meteorological Organization, 2015). In soils, N₂O is produced as an intermediary in several microbially driven processes consisting of nitrification and denitrification (Baker and Conrad, 2011). It has been acknowledged that nitrification and denitrification represent critical pathways for nitrogen (N) loss (van Groenigen et al., 2015; Zhang et al., 2015). Globally, animal waste contributes about 10% of the annual N₂O emissions from agricultural soils (Moser et al., 1998). According to the IPCC guidelines, the default N₂O emission factor for manure and urine deposited on pastures is 2% of N excreted (IPCC, 2006). The main N component in excreted urine is urea which, when deposited on soil, is rapidly hydrolyzed to ammonium (NH₄⁺) and transformed into nitrate (NO₃⁻) enabling N₂O production (Whithead,

Author: LivestockPlus team	Subject: N2O emission reductions
Publisher: Soil Biology and Biochemistry (Elsevier)	Year reported: 2016
Project highlights types: <ul style="list-style-type: none">• Capacity enhancement• Breakthrough science	Is global: Yes
Start date: Jan 2016	End date: Jan 2017
Keywords: Biological nitrification inhibition, Bovine urine patches, <i>Brachiaria humidicola</i> , Ammonia oxidizing bacteria and archaea, N2O emission factor	Countries:
Highlight description: Peer reviewed paper with breakthrough science information on N2O emission mitigation in soils with improved pastures	
Introduction / Objectives: (i) evaluate N2O emissions from urine patches of two forage grass cultivars: <i>Brachiaria humidicola</i> cv. Tully (BT) and <i>Brachiaria</i> hybrid cv. Mulato (BM), (ii) establish urine patch N2O emission factors for both forage grass cultivars, and (iii) determine potential relationships between the abundance of prokaryotic ammonia oxidizers nitrate (NO3) production and N2O	

emission.

Results: We hypothesized that nitrate (NO₃) production and nitrous oxide (N₂O) emissions from urine patches deposited on soils under forage grasses with high BNI capacity are lower than those with forage grasses with low BNI capacity. This hypothesis was tested using field plots of two tropical forage grass cultivars, *Brachiaria humidicola* cv. Tully (BT) and interspecific *Brachiaria* hybrid cv. Mulato (BM) which, correspondingly, have high and low BNI capacity. Nitrification rates and amoA gene copy numbers of ammonia oxidizing archaea (AOA) and bacteria (AOB) in soils under the two forage grasses were quantified before and after urine and water (control) application, as well, an additional experiment was conducted to quantify denitrification potential. Moreover, soil N₂O emissions from simulated urine (0.123 kg N m²) and water patches were monitored over a 29-day period. Results showed a greater suppression of nitrification, denitrification and AOA abundance in soils under BT than those under BM. Positive relationships (p 0.05) existed between AOA and AOB abundance and NO₃ contents in soils under BM. Bovine urine resulted in higher cumulative N₂O fluxes from soils under BM (80 mg N₂O-N m²) compared to those under BT (32 mg N₂O-N m²). Consequently, N₂O emission factors were higher for soils under BM (0.07%) than under BT (0.00002%).

Partners: INTA Argentina, University of Hohenheim and University of California Davis

Links / Sources for further information:

http://www.tropentag.de/2016/abstracts/links/Arango_zKT2j6zO.pdf

<http://www.sciencedirect.com/science/article/pii/S003807171630270X>

<http://blog.ciat.cgiar.org/tropical-grasses-feed-and-plumber/>

Project highlight 232

Title: Conference presentation: GanaderíaPlus: Apoyando el desarrollo de estrategias bajas en emisiones del sector ganadero en Latinoamérica



Author: Jacobo Arango	Subject: Congress presentation
Publisher: LXI Reunión Anual del Programa Cooperativo Centroamericano para el Mejoramiento de Cultivos y Animales (PCCMCA 2016)	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Successful communications • Inter-center collaboration • Policy engagement 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords: Livestock NAMA, mitigation, Costa Rica, Colombia, GHG	Countries: Costa Rica, Colombia
Highlight description: Project presentation at the "Programa Cooperativo Centroamericano para el Mejoramiento de Cultivos y Animales (PCCMCA 2016)"	
Introduction / Objectives: Mostar avances del proceso en apoyar el desarrollo de estrategias bajas en emisiones del sector ganadero en Latinoamérica	
Results: Progress made in Costa Rica and Colombia supporting the NAMA	
Partners: LivestockPlus team	
Links / Sources for further information: https://cgspace.cgiar.org/handle/10568/72825	

6. Activities

A17 - Identification of mitigation options and low cost GHG quantification methods to support NAMA implementation

Description: We will identify best-fit mitigation options by quantifying changes in GHG fluxes, soil carbon stocks, and productivity from different cattle-based systems in alignment with government priorities (e.g., improved pastures in Colombia and whole-farm management in Costa Rica). LivestockPlus will evaluate low-cost approaches (milk quality, animal productivity and feed surveys) for MRVs. Promising outcomes will be integrated into the SAMPLES guidelines and will be written up as an addendum (e.g., MRV) to increase the scope of the guidelines. SAMPLES is now integrated into projects instead of a stand alone CCAFS activity (e.g., Activity 17 here). Therefore, we have included deliverables in Livestock Plus for GHG methods development research that has taken place outside of Costa Rica and Colombia (e.g., Africa and Nicaragua) but yet contributes to goals of low cost methods for enabling emission reductions.

Start date: Jan 2015

End date: Jan 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Chirinda, Ngonidzashe
<n.chirinda@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: Despite budget cuts, we have been able to progress towards the identification of best-fit mitigation options. Specifically, we have quantified changes in GHG fluxes, soil carbon stocks, and the productivity of different cattle-based systems in alignment with the NAMAs in Colombia and Costa Rica. Low cost methods for GHG quantification have been identified and implemented to quantify CH₄ and N₂O emissions from livestock systems. As a product of this work we have been able to publish several peer reviewed articles that contribute towards advancing science and also to inform the NAMA process. We have been able to align our work with that in a new USAID project aimed at validating the Ruminant model for tropical conditions. Specifically, we are exploring the possibility of using this model for MRV systems in the tropics and also evaluating the mitigation potential of different cattle diets.

Deliverables in this activity:

- D2780: Greenhouse gas fluxes from agricultural soils of Kenya and Tanzania
- D2779: Limits of agricultural GHG calculators to predict soil N₂O and CH₄ fluxes in tropical agriculture
- D2778: Evaluating fire severity in Sudanian ecosystems of Burkina Faso using Landsat 8 satellite images
- D2777: Methods for Measuring Greenhouse Gas Balances and Evaluating Mitigation Options in Smallholder Agriculture
- D2884: Introduction to the SAMPLES Approach
- D2886: Scaling Point and Plot Measurements of GHG Fluxes, Balances, and Intensities to Farms and Landscapes
- D2887: SAMPLES Website

A19 - Engagement and capacity building for NAMA implementation in Costa Rica and Colombia

Description: LivestockPlus will engage in existing and convene new platforms to share experiences and scientific outputs and respond to stakeholder requests using the information generated in this project. We will reinforce existing relationships with government actors (e.g., Roundtables) and also engage with new partners in the policy making and scientific support processes through capacity building workshops involving multiple stakeholders (including farmers and the private sector), one-on-one engagement and participatory field day exercises. Engaging the farmers and farmer associations (e.g., cooperatives, meat commissions, and chambers) in scenario building and developing sustainability roadmaps is a crucial step for ensuring ownership of proposed NAMAs by cattle producers.

Start date: Jan 2015

End date: Jan 2018

Activity leader: CATIE - Centro Agronómico Tropical de Investigación y Enseñanza Somarriba, Eduardo <esomarri@catie.ac.cr>

Status: On-going

Overall activity or progress made during this cycle: Members of the project team have been able to position the LivestockPlus project in diverse stakeholder platforms as a referent project that generates the needed technical information, to inform the designing and implementation of NAMAs in Costa Rica and Colombia. During 2016, members of the project from different institutions had an active participation in the sustainable roundtables of Colombia and Costa Rica, with different stakeholders from the livestock value chain, to discuss and inform the governments on practices, technologies and market options that have potential to promote more sustainable and resilient livestock systems. The project has three PhD students working on three key aspects: 1) Enteric methane emissions and MRV systems; 2) Soil N₂O emissions from urine and manure patches; and 3) LCA analysis for different livestock production systems. In 2016, the project has also hosted visiting students (BSc, MSc, PhD) from different national and international institutions.

Deliverables in this activity:

- D126: Policy brief on the potential gender impacts of cattle based NAMAs in Latin America (ICRAF)
- D173: Info note outlining challenges and opportunities for developing livestock-based NAMAs in the target countries
- D117: Review of opportunities and challenges in use of MRV systems for NAMA on cattle production

A20 - Quantification of socioeconomic impacts of low emissions pasture management in cattle production systems

Description: The consortium will compare socioeconomic and biophysical data for conventional and improved low emissions pasture management in target regions to enable selection of best-fit mitigation options and to determine their costs. Socioeconomic and trade-off analyses will be used to assess farm level costs (e.g., labor and inputs), benefits, and barriers to decision making. Farm-level data will be collected using quantitative and qualitative methods and disaggregated by gender, social class, age and ethnicity. Data on the economic context and market linkages for cattle production will also be collected. Network and policy analysis will be conducted to assess access to information and inputs and determine the policy instruments required to support low carbon development. Finance modalities will be assessed and financial needs for NAMAs will be estimated.

Start date: Jan 2015

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Tapasco, Jeimar
<j.tapasco@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: The collected data were used to inform the NAMA Information Note (NINO) development in Colombia. Improved pastures were included as one option for reducing GHG emissions from the livestock sector. In Costa Rica, collected data also informed mitigation actions included in the designed Livestock NAMA. The collected data are also informing decisions made at the livestock roundtables attended by members of the project team.

Deliverables in this activity:

- D173: Info note outlining challenges and opportunities for developing livestock-based NAMAs in the target countries
- D175: Training program materials/curriculum to strengthen regional capacities in GHG research for NAMA development
- D311: NAMA proposal on cattle production submitted from Colombia to NAMA facility or UNFCCC (2018) (CIAT)
- D2267: Stockholder engagement towards Livestock NAMA

7. Leverages

No leverages added

Title: Integrated agricultural technologies for enhanced adaptive capacity and resilient livelihoods in climate-smart villages (CSVs) of Southeast Asia

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2018	RP SEA	Tan Yen, Bui <y.bui@irri.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2	On-going	CIAT - Centro Internacional de Agricultura Tropical - Colombia	Campilan, Dindo <d.campilan@cgiar.org>

Project is working on

Flaship(s)
F2 (before F1 - Andy): Climate-Smart Technologies and Practices

Region(s)
SEA: Southeast Asia

Project summary

In Southeast Asia CSVs' wide-ranging agro-ecosystems, CCAFS seeks to help build livelihood resilience of farming systems to extreme weather events, seasonal shifts and related climate change risks. This project will provide integrated climate-smart agriculture (CSA) options to enhance adaptive capacity in CSVs. Key activities: 1) Assessment and priority setting – identify biophysical and socio-economic constraints, review/consolidate results from prior CSV assessments, conduct systematic field survey and spatially explicit assessment of crop suitability, and CSA multi-stakeholder planning. 2) Participatory action research – Conduct participatory farmer-group testing of technologies and practices within CCAFS' broader CSV social learning process, farmers' training/capacity building, and learning-oriented monitoring and evaluation. 3) Knowledge sharing and networking – incorporate location-specific technologies and practices in innovation strategies of parallel FP1.2-13 projects in CCAFS Southeast Asia through: joint impact pathways planning, developing knowledge products as input to the latter's upscaling activities, and co-organizing events for policy engagement and public awareness.

2. Partners

Partner #1 (Leader)

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Campilan, Dindo <d.campilan@cgiar.org>	Activity 2014-171 *Leader*.	Hanoi, Vietnam
Project Coordinator	Bui, Vinh Le <V.Bui@CGIAR.ORG>	Project Coordination	Hanoi, Vietnam

Partner #2

Institution: IWMI - International Water Management Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Pavelic, Paul <p.pavelic@cgiar.org>	To serve as lead Center for implementing activities in assigned CSV	HQ

Partner #3

Institution: BIOVERSITY - Bioversity International

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Vernooy, Ronnie <r.vernooy@cgiar.org>	Activity 2014-171 *Partner*. Activity 2014-173 *Partner*. To co-design and facilitate training-workshops for CSA assessment-priority setting and M&E To assist in action research for testing CSA technologies and practices in target CSV/s	HQ

Partner #4

Institution: ILRI - International Livestock Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Staal, Steve <s.staal@cgiar.org>	Activity 2014-171 *Partner*. Activity 2014-173 *Partner*. Activity 2014-182 *Partner*. To co-design and facilitate training-workshops for CSA assessment-priority setting and M&E To assist in action research for testing CSA technologies and practices in target CSV/s.	HQ

Partner #5

Institution: CIP - Centro Internacional de la Papa

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Wheatley, Christopher <c.wheatley@cgiar.org>	Activity 2014-171 *Partner*. Activity 2014-173 *Partner*. To assist in action research for testing CSA technologies and practices in target CSV/s	Los Baños, Philippines

Partner #6

Institution: ICRAF - World Agroforestry Centre

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Simelton, Elisabeth <e.simelton@cgiar.org>	Activity 2014-171 *Partner*. To serve as lead Center for implementing activities in assigned CSV	Vietnam, Vietnam
Partner	Catacutan, Delia <d.c.catacutan@cgiar.org>	Activity 2014-173 *Partner*.	Los Baños, Philippines

Partner #7

Institution: IRRI - International Rice Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Wassmann, Reiner <r.wassmann@irri.org>	Activity 2014-171 *Partner*. Activity 2014-181 *Partner*. To serve as lead Center for implementing activities in assigned CSV	HQ
Partner	Hayashi, Keiichi <k.hayashi@irri.org>	Activity 2014-173 *Partner*.	HQ

Partner #8

Institution: WorldFish - WorldFish

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Beare, Douglas <d.beare@cgiar.org>	Activity 2014-171 *Partner*. Activity 2014-181 *Partner*. To serve as lead Center for implementing activities in assigned CSV	HQ

Partner #9**Institution:** NOMAFSI - Northern Mountainous Agriculture and Forestry Science Institute**Contact(s):**

Type	Contact	Responsibilities and contributions	Branch
Partner	Pham, Sen <phamthisenprc@gmail.com>	Dr. Pham Thi Sen and her team have been responsible for research activities on: - Integrated Crop Management: testing cold-tolerant rice varieties, making bio-fertilizer from rice residue, and out/upscaling these models beyond Ma CSV - Integrated home gardens: maximizing the utility of home gardens and making interrelated eco-efficiencies of various components in the system to diversify and maximize income sources.	HQ

Partner #10**Institution:** VNUA - Vietnam National University of Agriculture**Contact(s):**

Type	Contact	Responsibilities and contributions	Branch
Partner	Cao, Ha <cvhahua@gmail.com>	- Field assessment and monitoring for pest & disease, soil microbiology and soil fertility - Capacity building for students, faculty and staff	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	1. Having a good partnership with NOMAFSI is very important in achieving the performance goals of the project utilizing their expertise, experience and local presence. This partnership must be continually strengthened through on-going, planning meetings and workshops. 2. Research interests and plans are shared among CGIAR partner centers to identify synergies between projects 3. Knowledge sharing and communications must be strengthened and improved to help achieve the goal above. Overall, CGIAR Centers have agreed that in the face of budget cuts, it is best to collaborate through complementary activities rather than direct fund transfers.

Partnerships overall over the last reporting period:

1. NOMAFSI's parallel activities were integrated in the overall CSV coordination workplan. Joint activities included training-workshops, village library, photovoice, and CSV social mobilization, NOMAFSI's rice CSA research was reported through P28/FP1.1) and 2017 NOMAFSI workplan was discussed and agreed with P28 and SEA office. 2. ICRAF and CIAT originally planned: (i) digital soil mapping, (ii) testing agroforestry interventions, (iii) cross CSV visits, and (iv) M&E support. Due to limited budget, only 3 and 4 were undertaken -- which resulted in a cross-CSV roving workshop for farmers, and development of project ME framework through expertise input from ICRAF, with Bioversity International.

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Climate Smart Village Sites	21.764	105.023	Ma
Climate Smart Village Sites	17.997	106.161	My Loi
Climate Smart Village Sites	9.369	105.672	Tra Hat
Climate Smart Village Sites	18.358	102.463	Ekxang
Climate Smart Village Sites	13.185	103.247	Rohal Suong
Country			Philippines
Country			Vietnam
Province	13.185	103.24700000000007	Yen Bai

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:

Local stakeholders identify and meet priorities of farmers, including women/marginalized groups, and accessing knowledge/technologies/tools towards increased awareness and enhanced capacity for CSA adoption. CSA technologies and practices become integrated in farmers' overall management strategy for their agricultural systems, and consequently improving resilience of their livelihoods as indicated continued productivity growths in the face of risks associated with natural disasters, weather variabilities, and longer-term soil degradation and water-related stresses. Besides farmer-endusers in CSVs who directly take up locally adapted technologies/practices, target next-users include: 1) community-based institutions, such as local government units and development NGOs in setting up CSA incentive mechanisms; 2) external stakeholders, including regional research institutes in prioritizing CSA-relevant agendas and value-chain actors in stimulating market demand for CSA-generated farm products, 3) national/subnational policy-making and regulatory agencies in formulating climate change adaptation plans, and 4) other provinces and countries in Southeast Asia in distilling project lessons to establish similar CSA initiatives. Consequently, the next users

Annual progress towards outcome (end of 2016*): Based on the budget cuts, the project is redesigned to target only 2 CSVs -- North Vietnam and Central Vietnam. In both CSVs, an initial portfolio of integrated technologies for CSA would have been tested in a first-season trial with community-based learning groups. These CSA technologies are identified from the 2015 activity of climate-risk targeting and CSA priority setting with CSV stakeholders.

Annual progress towards project outcome in the current reporting cycle (2016*): 1. Testing an initial portfolio of CSA T&Ps in the first testing cycle 1.1. Integrated cassava-grass strips-cowpea systems 1.2. Livestock waste management 1.3. Diversified home garden systems 1.4. Rice sustainable intensification (via NOMAFSI) 1.5. Rice straw processing for bio-fertilizer (via NOMAFSI) 2. Validation studies to assess feasibility and potential outcome of other prioritized CSA T&Ps 2.1. Acacia livelihood development 2.2. Integrated water management 3. Continuation of social mobilization - Forming 5 CSA groups in accordance with 1.1 to 1.5 - Inauguration of the village library with CCAFS SEA-CIAT co-funding mechanism - Establishment of the climate finance fund to support establishment of CSA livelihoods 4. Cross-CSV visits and community learning activities - Cross visits to the Philippines (1) in January, and to Nepal (2) in July and September - Roving workshop in May with over 30 participants from 5 CSVs - Photovoice exercise in October-November: participatory documentation of 15 Ma farmers' CSA perspectives and actions 5. Hosting visitors for field exposure and learning on CSA-CSV - Multiple CIAT/CGIAR delegations visiting Ma in 2016 - 15 students and professors from North Dakota State University, 15 March - 58 students and professors from the USA, on 16 September 2016 and 10 February 2017 6. Formalizing partnership with Yen Bai provincial government - MOU compiled and signed with Yen Bai DARD on 01 August - Dialogues among Yen Bai DARD, Ma farmers and project researchers officials about economic development policies and possible support related to CSA 7. Outscaling to neighboring province - A 3 day training course for farmers in Cao Bang province, 15-17

February

How communication and engagement activities have contributed to achieving your Project outcomes:*

1. Communication - Participatory project planning activity with partners and farmers through multi-stakeholder meetings/workshops - Blogging activities - Involving visitors in writing blogs about their impressions and observations of the project 2. Engagement - Established CSA groups with leaders allowed farmers to work in group on specific CSA T&Ps. CSA farmers were empowered to discuss, make decisions and help each other in implement the interventions and scale them out - Inclusion of provincial officials engaged them in project activities and dialogues with farmers and researchers in aligning development policies based on evidence-based research results and farmers' needs.

Evidence documents of progress towards outcomes:*

<https://marlo.cgiar.org/data/ccafs/projects//28/projectOutcome/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx>

Annual progress towards outcome (end of 2015): A key outcome story at the end of Year 1 will be on how local stakeholders jointly identify and prioritize CSA technologies and practices to guide CSV-level action research. Local stakeholders comprise farming households, community groups, local government in the target communities, together with external development/research/policy-making organizations involved in local-level CSA interventions. It will highlight how the use of CCAFS and related methods and tools can effectively support climate-smart local decision-making and action planning. These methodological innovations include spatially explicit participatory field assessments, ex-ante and scenario analysis for crops and systems, and whole-farm planning.

Annual progress towards outcome (end of 2017): In each CSV, the portfolio of CSA technologies would have been field-tested and adapted in at least 2 cropping seasons. The results are synthesized and served as input to CSV-level adaptive planning and in the production of knowledge products for wider sharing.

Annual progress towards outcome (end of 2018):

Lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* 1. In year 2, project staff earned trust and cooperation from local community in testing and adopting introduced CSA interventions. Ma farmers first doubted about the feasibility of the project, then became curious to participate in activities and finally convinced of the potential outcomes after participating in the first CSA testing cycle 2. Regular inclusion of provincial DARD officials gradually stimulates the alignment of policies for CSA. The officials have started to listen and be aware of good policies for fighting climate change. 3. Emerging outputs and outcomes from Ma CSV have served as pool of knowledge to guide project efforts for horizontal scaling in the Philippines.

4.2 CCAFS Outcomes

RP SEA Outcome 2019: Local public and private sector stakeholders (service providers, farmer leaders, etc.) are engaged in identifying and meeting farmer priorities, incl. women and marginalized groups, and using CSA knowledge, technologies, and tools to increase their awareness and capacity to advise on evidence- and knowledge-based climate smart technologies.

Indicator #1: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019
<p>Target value: 40</p> <p>Cumulative target to date: 60</p> <p>Target narrative: Project outcomes target local stakeholders -- as intermediate and end users -- for 2 CSVs in Vietnam. In each CSV, 1 farmer group and 3 local institutions jointly agree on priority CSA technologies and practices for adaptive testing and co-invest in action-research activities. CSA innovations are integrated in planning documents of 6 new projects/programs in CSVs. Key verifiable indicator is the set of multi-year activities with formally assigned budget/resources and implementing team/partnership. Beyond the CSVs, similar outcomes are expected in 4 other countries (Philippines, Indonesia, China, India) covering sub-national/local CSA plans, public-sector projects and large-scale investment programs (e.g. IFAD). .</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: Each of these initiatives/institutions would cover at least 30% women beneficiaries.</p>
2015
<p>Target value: 10</p> <p>Cumulative target to date: 10</p> <p>Target narrative: <Not Defined></p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2016

Target value: 10

Cumulative target to date: 20

Target achieved: 11.0

Target narrative: Development initiatives and public institutions in Vietnam, along with 4 other countries (Philippines, Indonesia, China, India) for linked bilateral projects covering sub-national/local CSA plans, public-sector projects and large-scale investment programs (e.g. IFAD).

Narrative for your achieved targets, including evidence: - More systematic partnership mechanisms for Yen Bai/Yen Binh DARD officials and farmers have been established through various multi-stakeholder events and meetings as described in the previous section - Parallel and complementary CSA initiatives have been initiated between Ma CSV and other locations in the province, particularly in Van Yen district - The expansion of the project to the Philippines resulted in CSA/CSVA initiatives launched in 10 provinces (regions) in a bilateral project partnered with and sponsored by Adaptation & Mitigation Initiative in Agriculture (AMIA)

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: - In Ma village, 65% of farmer participants are women, who are directly implementing project activities and also leading the CSA groups - In Van Yen, the lead collaborator is an experienced female farmer and there is expected to be over 50% of women will benefit and participate in technical exchange activities in 2017 - In the Philippines, a gender lens has been introduced in field-level exercises for climate-risk vulnerability assessment (CRVA) and climate-resilient agrifisheries (CRA) decision support

The expected annual gender and social inclusion contribution to this CCAFS outcome: Each of these initiatives/institutions would cover at least 30% women beneficiaries.

RP SEA Outcome 2019: The public sector at various level are coordinating efforts towards supporting project implementation, providing incentives mechanisms/schemes, encouraging private sector participation and developing local adaptation plan to promote widespread adoption and investment on CSA interventions

Indicator #1: # of public-private actors at national and sub-national levels are using new incentive mechanisms or business models/ markets that explicitly promote climate smart approaches along the value chain, using CCAFS science

2019
<p>Target value: 80</p> <p>Cumulative target to date: 110</p> <p>Target narrative: The project's emerging set of research outputs, i.e. CSA technologies and action learning methods/tools are used by at least 80 institutional actors at national and sub-national levels in Vietnam and 4 other countries for targeted outscaling.</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: Each of these initiatives/institutions would cover at least 30% women beneficiaries.</p>
2015
<p>Target value: 10</p> <p>Cumulative target to date: 10</p> <p>Target narrative: <Not Defined></p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2016

Target value: 20

Cumulative target to date: 30

Target achieved: 15.0

Target narrative: The project's emerging set of research outputs, i.e. CSA technologies and action learning methods/tools are used by at least 20 institutional actors at national and sub-national levels in Vietnam and 4 other countries for targeted outscaling.

Narrative for your achieved targets, including evidence: In both Vietnam and the Philippines, at least 15 CSA T&Ps are in the process of being assessed/tested/introduced in target communities.

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: The project has exceeded the target of 30% women as project participants and beneficiaries.

The expected annual gender and social inclusion contribution to this CCAFS outcome: Each of these initiatives/institutions would cover at least 30% women beneficiaries.

Major Output groups:

- F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:

The project in general -- and activities 2014-173, 181 and 182 specifically -- will contribute to the impact pathways of other CCAFS FP1 projects in Southeast Asia (led by IRRI and ICRAF), by providing a menu of field-tested CSA technologies and practices -- packaged into multi-media knowledge products and shared through various learning modes -- thereby forming the basis for upscaling efforts and agro-climatic advisory services.

Collaborating with other CRPs

Roots, Tubers and Bananas
Description of collaboration: co-located research sites
Policies, Institutions and Markets
Description of collaboration: co-located research sites

4.4 Case Studies

No case studies added

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Major Output groups - 2016

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: In each CSV, at least 2 community-based learning groups are organized to support the testing of potential CSA options based on the climate risks identified

Brief summary of your actual 2016 contribution towards the selected MOG: 5 community-based learning groups were set up to test CSA T&Ps in each village of Ma and My Loi

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: The action learning groups include at least 1 all-women participants to ensure that CSA risks affecting women are directly addressed

Summary of the gender and social inclusion dimension of the 2016 outputs: - 65% of total participants in project activities are women - Village library was inaugurated to enable all farmers' access to documents and ICTs that assist the learning and adopting process of CSA T&Ps

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: Portfolio of integrated CSA technologies are field-tested with community-based action learning groups in 2 CSVs

Brief summary of your actual 2016 contribution towards the selected MOG: 5 sets of CSA T&Ps - In Ma: Cassava-forage-cowpea systems, livestock waste management, sustainable rice intensification, rice straw processing, and integrated home gardens - In My Loi: Livestock waste management, integrated home gardens/agroforestry systems/vegetable systems, and improved animal keeping

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: CSA technologies are prioritized and evaluated based on criteria that include potential benefit/impact to women and men

Summary of the gender and social inclusion dimension of the 2016 outputs: - In testing of CSA T&Ps in Ma and My Loi CSVs up to, 65% of participating farmers are women. Over 50% of participants in meetings/workshops are women, with some of the CSA groups also led by women.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

Results of assessment phased (climate-risk targeting and CSA priority setting) include field-validated methodological guidelines for wider application within and beyond CCAFS.

Brief summary of your actual 2016 contribution towards the selected MOG: - Farmer-policy maker dialogue/platform in Yen Bai for aligning policies to CSA adoption and out/up-scaling in 2017 and onwards - A national government-led program framework for climate-resilient agrifisheries (CRA) developed for 10 regions in the Philippines within AMIA project

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output:

The methodological guidelines include gender-differentiated tools for data collection and analysis

Summary of the gender and social inclusion dimension of the 2016 outputs: In Ma: - A climate finance fund supporting poor women and farmers in testing and adopting CSA T&Ps- Agroclimate service information provided daily to Ma farmers In My Loi: - Biointensive vegetable school garden for kindergarten and primary school children - Agroclimate service information provided daily to Ma farmers

Major Output groups - 2015

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG:

Multi-level meetings and workshops were carried out Various social mobilization activities were conducted to prepare for the implementation of the project Formation of farmer groups to prepare for testing different CSA T&Ps. Five multi-stakeholder meetings at 5 CSVs were conducted to discuss the research results and work plans for 2016.

Brief summary of your actual 2015 contribution towards the selected MOG: We created a multi-stakeholder learning platform between CIAT/ICRAF and multi-level governments, CSV farmers, national research partners, and private sector. Regular meetings were organized for knowledge, research results to be exchanged, discussed and shared. Visits were made for Ma and My Loi farmers to learn new knowledge/experience from other farmers.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output:

Women unions play an important role in all CSVs in acquiring and applying CCAFS tools. Poor and marginalized farmers were given the opportunity to participate in the project and they engaged very actively in all activities of 2015.

Summary of the gender and social inclusion dimension of the 2015 outputs: Champion female farmers to be identified for leading some of the testing groups. Successful female farmers from other areas to be identified for disseminating knowledge and experience to Ma villagers in testing similar option/s. Inclusion of poor/disadvantaged farmers in CSA T&Ps testing groups to improve their resilience and livelihoods.

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG:

Formation of farmer groups to test CSA T&Ps. Five CSA priority setting workshops to prioritize CSA T&Ps with local farmers and governments. Baseline studies for situation analysis and needs assessment (SANA) in all sites. Organizational landscapes were drawn to find linkages among local partners and new linkages with CGIAR centers.

Brief summary of your actual 2015 contribution towards the selected MOG: Five CSA T&Ps were finalized for testing in 2016 after the participatory priority setting and cost benefit analysis. Three more possible CSA T&Ps were picked up later from IRRI and IWMI. Detailed testing plans of 3 have been drafted. Results were shown to project's stakeholders in January 2016.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: Project targeting women and the poor in all of the interventions prioritized via supporting them with seeds and breeds besides technical guidance. Site visits were conducted to help these groups learn diversified production systems.

Summary of the gender and social inclusion dimension of the 2015 outputs: 5-7 active female farmers have been identified to lead some of the groups, and a few of them are poor but willing to take lead in testing activities. 5-7 poor households have been selected to test 3-5 CSA T&Ps and receive additional support from the project in implementing the tests.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: A group conducted a cost-benefit analysis (CBA) and came up with 5 prioritized CSA T&Ps which are evidence-based. Detailed analysis will only be released in May 2016. However, this initial result was sufficient to plan the testing activities in 2016.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: This CBA work was randomized but still slightly modified to include sufficient number of poor/disadvantaged households to collect and interpret information and perception from them. Some of these households will be testing the selected CSA T&Ps in 2016.

Major Output groups - 2014

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

5.2 Deliverables

No deliverables added

5.3 Project Highlights

Project highlight 238

Title: Implementing 5 CSA T&Ps in Ma: (i) cassava-grass strips-cowpea, (ii) livestock waste management, (iii) integrated home garden, (iv) sustainable rice intensification, (v) rice straw processing; and establishing 5 CSA groups



Author: Nguyen Duy Nhiem, Le Khai Hoan, Do Trong Hieu, Nguyen Viet Cuong, Nguyen Tuan Cuong, Bui Le Vinh

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Participatory action research

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords: CSA testing and training, CSA groups, farmer participation

Countries: Vietnam

Highlight description: - The team launched and tested 5 CSA T&Ps with farmers participated in 5 corresponding CSA groups - Training courses were delivered to farmers inside and outside of Ma village - Farmers implemented and disseminated the interventions to peer farmers in the village - Women were empowered to participate and take lead on implementing

Introduction / Objectives: To provide Ma farmers a set of knowledge in implementing introduced CSA T&Ps and prepare them to be scaling-out nuclear for spreading out the interventions within and outside of Ma village

Results: - Ma farmers went from doubt (beginning of 2016) to trying the 5 introduced CSA T&Ps (mid 2016) and finally to believing and wanting to implement these interventions in their daily lives (the last half of 2016) - 14 households officially participated in the testing activities and more (unmeasured) later adopted the 5 introduced CSA T&Ps later in the year - Technical training courses were organized for farmers inside and outside of Ma to initiate the scale-out of these CSA T&Ps when they first got introduced in Ma. - A development project in Cao Bang province (~250km north of Ma) funded by ChildFund Vietnam contacted the project team for a technical training course for 3 communes in Cao

Bang on 25-27 February 2017. The training was successful and ChildFund Vietnam will organize a cross visit to Ma for Cao Bang farmers in April-May 2017 - Officials as well as farmers of Van Yen and Van Chan districts in Yen Bai province wished to adopt the introduced CSA T&Ps from Ma through a technical training in 2017.

Partners: - Northern Mountain Agroforestry Science Institute (NOMAFSI) - Vietnam National University of Agriculture (VNUA) - Department of Agriculture and Rural Development of Yen Bai province - Department of Agriculture and Rural Development of Yen Binh district - Vinh Kien People's Committee - Ma village

Links / Sources for further information:

<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0>

Project highlight 239

Title: Validation study on acacia livelihood development



Author: Didier Lesueur, Bui Le Vinh, Nguyen Tuan Cuong

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Participatory action research

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords: Ganoderma disease, acacia death, soil fertility decline, biological nitrogen fixation, soil health improvement

Countries: Vietnam

Highlight description: - Veneer making is the most flourishing business in Ma and the region, which creates a huge opportunity for tree crops, including eucalyptus and acacia, to develop, covering over 300 ha production area in Ma. Eucalyptus occupies over 95% of the total plantation area, although it is known as a soil fertility degrading plant. Acacia, while being good for soil fertility improvement through its biological nitrogen fixation (BNF) mechanism, makes up less than 5%. - Farmers in Southeast Asia in general and in Ma in particular have been experiencing a deadly disease in acacia which Ma farmers refer to fungus that destroys acacia plantations. Many have lost a big part or all of their plantations because of this disease, which made most of them plant eucalyptus even though they know how good and bad acacia and eucalyptus can be to soil fertility. - Soils under eucalyptus plantations, therefore, have been deteriorating in quality and fertility and many fear that they can't conserve good soils for their future generations to making their livings from.

Introduction / Objectives: - To investigate quality of acacia seedlings at different nurseries to have understanding on whether weak acacia seedlings, i.e. low nodulation level, might contribute to low

quality acacia plantations - To plan support helping seedling producers improve seedling quality

Results: - The investigation of seedlings' nodulation revealed that most of the nurseries have bad quality seedlings based on the numbers of nodules counted for each of the seedlings. - The soil analytic data shows that: the texture of soils collected is highest in silt and sand; the clay content is the lowest; most soils are acidic indicated by pH below 5; OC and Nt contents are low and so are the amounts of exchangeable cations. - It's quite early to confirm the hypothesis as we still need to analyze this raw data statistically. But from the physical angle, most of the collected seedlings don't meet a requirement for being healthy seedlings based on their nodulation level. The project team will run a statistical analysis of all of the data and make final findings and conclusion in the first half of 2017.

Partners: Yen Bai DARD, Yen Binh DARD, Vinh Kien commune, Ma village

Links / Sources for further information:

<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0>

<http://blog.ciat.cgiar.org/fight-against-ganoderma-root-rot-disease-begins-in-the-acacia-seedling/>

Project highlight 240

Title: Validation study on water scarcity



Author: Guillaume Arthaud	Subject:
Publisher:	Year reported: 2016
Project highlights types: • Participatory action research	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords: water scarcity, abandoned rice field, low productivity	Countries: Vietnam
<p>Highlight description: - Ma farmers have been seeing pieces of their limited 2 season paddy area become mono season. This is because increasing water scarcity has become a constraint to rice production in Ma. Ma farmers stated that since the clearance of primary forests and intensified agriculture on sloping land, provision of water from the surrounding mountains has reduced remarkably, turning part of their productive rice fields into mono season or abandoned fields. This, of course, is affecting rice production in Ma and Ma farmers are in need of solutions to improve the situation. - A research team was organized to conduct an investigation study on the water issue for rice paddies in Ma. On 30th May, a first fieldtrip was organized by Guillaume Arthaud and Bui Le Vinh to explore the water issue in Ma. A quick interview with Mr. Tam, the village leader, and a tour around the village were conducted to sufficiently collect a brief overview of water scarcity in Ma. - The second fieldtrip took place in the first week of September to achieve 2 major goals. The first one was to interview 11 farmers representing rice farmers who have water issue with their rice fields in the valley. The main information collected concern the type of issues, the location of the fields and their area, the system used for irrigation, the crop calendar and the water layer's level in the field. The second goal was to collect GPS data and soil samples from the fields of these farmers. These samples would later be analyzed to determine parameters like the hydraulic conductivity at saturation, the density, the water content at field capacity, at wilting point and when the soil is saturated.</p>	
<p>Introduction / Objectives: To investigate possibilities to improve water supply for rice production in Ma village</p>	

Results: - Soil samples were collected, processed and sent to the Institute of Agricultural Environment (IAE) for analyses of: (i) water content at wilting point (? wp), (ii) water content at field capacity (? FC), (iii) water content when soils is fully saturated (? sat), (iv) water content when soils is crackling (? crac), (v) hydraulic conductivity at full saturation (Ks), (vi) soil density, and (vii) soil texture. - Daily and monthly weather data were collected for: T min, T max (T – temperature), rainfall, sunshine hours, air humidity, wind speed to calculate the evapotranspiration of reference (ET0) and other parameters. - A technical report is being formulated and will be consolidated in the first quarter of 2017 when the analytic data are delivered by IAE.

Partners: Institute of Agricultural Environment (IAE)

Links / Sources for further information: 1.

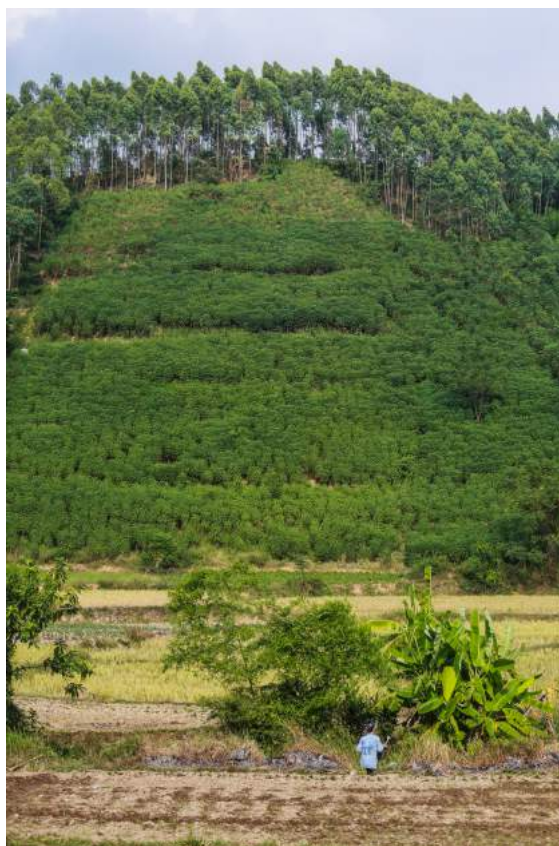
<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0> 2.1. https://www.dropbox.com/s/bulsg3s3gclapvy/Ma_Report_V1.docx?dl=0 2.2.

<https://www.dropbox.com/s/979fl8aplr6cj7o/Bibliography.docx?dl=0> 2.3.

<https://www.dropbox.com/s/4y0vi5xikqceev2/Annex.docx?dl=0>

Project highlight 241

Title: Testing cassava-grass strip-cowpea



Author: Bui Le Vinh, Nguyen Duy Nhiem	Subject:
Publisher:	Year reported: 2016
Project highlights types: • Participatory action research	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords: cassava monocrop, soil erosion, grass strip, erosion mitigation, biological nitrogen fixation, improved cassava yield	Countries: Vietnam
Highlight description: - Cassava monocrop in Ma village before the RTB project (2012-2014) had been leading to serious soil erosion and degradation. Soil fertility and cassava yield had declined seasonally as stated by Ma farmers. The CIAT-led RTB project was to help improve the situation by introducing grass barriers along contour lines to mitigate soil erosion and intercropped cowpea to improve soil fertility and soil moisture content. - A success story in Van Yen district became a motivation for the implementation of this CSA practice here in Ma. With the help of Van Yen DARD, Van Yen farmers started this smart practice in 2002 with forage seeds and cassava varieties provided through CIAT's channels. Over the last 15 years, Van Yen cassava farmers have made a great progress in terms of soil conservation, i.e. soil erosion mitigation, soil fertility stabilization and improvement,	

while managed to stabilize and gradually increased cassava yield. - Together with Ma cassava farmers, the CCAFS FP1.1 project well received the success story from Van Yen and took over the work of the RTB project to carry on this CSA practice in Ma.

Introduction / Objectives: To introduce a more resilient and sustainable cassava intercrop system that can sustain soil fertility and cassava yield by mitigating soil erosion and improving soil fertility through intercropped legumes

Results: - CSA launch: The launch happened on 24th February with around 35 participants from Yen Bai DARD, Yen Binh DARD, Van Yen extension department and farmer, representatives from ICRAF and My Loi farmers, Ma farmers and the CIAT-NOMAFSI project team. Researchers, governmental officials and farmers discussed about the rationale of implementing the practice and its pros and cons. Van Yen experience was the focus of the meeting and shared by an extension officer and a successful farmer of Van Yen district. - Farmer-to-farmer experience sharing: Mrs. Nga, a successful farmer from Van Yen was invited to the event to share Van Yen farmers' experience in setting up and implementing the practice for such a long period of time and the success that they've achieved. She then delivered a technical training on planting cassava, forage grass and cowpea on a prepared plot. A cross visit was organized on the 25th February to Van Yen for Ma and My Loi farmers to learn experience from Van Yen farmers in managing their intercropped cassava fields. - Formulation of a CSA group: The project team organized a group of 3 cassava farmers to form a CSA group for the cassava intercrop system, given that there are only 6 households that cultivate cassava in Ma. The primary objectives were to see the synergy of (i) diverse incomes (cassava and cowpea), (ii) linkage to livestock production through the forage grass, and (iii) improved soil fertility and resistance to pests of cassava. - A CSA group for cassava-grass strip-cowpea was established

Partners: Yen Bai DARD, Yen Binh DARD, Van Yen DARD, Van Yen farmers, Ma village

Links / Sources for further information: 1.

<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0> 2.

<https://www.dropbox.com/s/512xqxsbvrbplh/B%C3%A1o%20c%C3%A1o%20%28M%E1%BA%A1%29%20-%20Nguy%E1%BB%85n%20Tu%E1%BA%A5n%20C%C6%B0%E1%BB%9Dng.docx?dl=0> The 2nd report on pest control in cassava fields is in Vietnamese and still needs to be translated into English

Project highlight 242

Title: Testing livestock waste management (Vermicomposting and improved living bed for poultry)



Author: Nguyen Duy Nhiem	Subject:
Publisher:	Year reported: 2016
Project highlights types: • Participatory action research	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords: GHG emission, air pollution	Countries: Vietnam
<p>Highlight description: - Before the arrival of the CCAFS FP1.1 project, Ma villagers had been accustomed to freely grazing their livestock and having them excrete freely. Fresh animal dung (mainly from cow and buffalo) was everywhere, on the village roads, on the front yard, in the garden, etc, which made the environment very bad and dirty in the village. - Chickens were raised on earthen or poorly managed floors which is the residence of many infectious diseases to chickens. The death rate of chicklets used to be high before and the growth was slow. Many farmers had decided not to raise chickens because of high risks of failure. They really wished to have a solution to this issue. - Technical trainings: The project team organized two training courses on vermicomposting (on 24th April) and living bed for poultry (on 19th May) for Ma farmers. Farmers from neighboring villages were also invited to participate in the trainings for their own adoption (Photos 2 and 3). - CSA groups: Farmers joined two CSA groups: (i) Vermicomposting with 7 farmers and (ii) Improved living bed for poultry with 5 farmers. Each group has a group leader</p>	
<p>Introduction / Objectives: To reduce GHG emissions and provide feed to poultry and fish</p>	
<p>Results: - Farmers' positive feedback revealed that: (i) vermicomposting not only helps reduce bad smell caused by fresh dung but also provide nutritious feed for poultry with worms that feed on the dung; and (ii) the new living bed really improves the health growth of poultry. - Both practices have been well received and adopted well not only by farmers who participate in the 2 CSA groups but also those who are not official members including farmers from neighboring villages. However, the real number of adopters is still unknown. As recommended by the M&E team (session 5), we need a good</p>	

survey tool to statistically document the number of adopters to the introduced CSA T&Ps.

Partners: Vinh Kien commune, Ma village

Links / Sources for further information: 1.

<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0> 2. Training material for farmers and extension officers in Vietnamese: <https://www.dropbox.com/s/xxu47l8tmrtw0du/QT%20%E1%BB%A7%20ph%C3%A2n%20CIAT.pdf?dl=0>

Project highlight 243

Title: Integrated home garden

Author: Do Trong Hieu

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Participatory action research

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords: Better ecoefficiencies in home garden components

Countries: Vietnam

Highlight description: - Small to medium-sized gardens are important to farmers in northern Vietnam in terms of production for home consumption and for extra income if land and labor is available. The home garden system in Ma was quite simple before with a few major tree/crops, such as fruit trees (pomelo, mango...), popular vegetables for domestic consumption, some pigs, cows, fish and poultry. The utilization of land was not maximized, therefore, income from home gardens beyond self-supply was still limited. - Farmers tried to make their garden system more eco-efficient and complementary, such as fertilizing fruit trees and vegetables with animal dung, feeding fish with wild grass and kitchen residue in their gardens, etc. However, these eco-efficiencies are still limited due to non-diverse component in the home garden, low level of garden management and market orientation. With the help of the project farmers' home gardens can be made more integrated, eco-efficient and marketable. - With financial support from the CCAFS SEA office, the NOMAFSI team initiated this CSA in November 2015 with Mr. Tran Trung Kien, the first farmer to participate in this CSA activity. Major activities in this CSA are: (i) Pruning and fertilization of existing fruit trees (ii) Building "bio intensive garden" using organic input and sustainable farming practices to grow vegetables (iii) Establishment of "feed garden" (grass for animals and fishes, using VA06, Guatemala, Guinea....+ Trichantera Gigantea, L. Leucocephala, Gliricidia sepium (350 m2) (iv) Promoting cut-and-carry system into livestock production (v) Building goat barns (vi) Intercropping some annual crops into existing orchards (cabbage, sweet potato, taro, onions, kohlrabi, maize, etc.) (vii) Making compost from livestock fresh dung - The team organized various technical trainings for farmers on fruit tree pruning, garden fencing for vegetables, fruit tree-vegetable intercropping, etc.

Introduction / Objectives: To improve ecoefficiencies of garden components

Results: - The practice has received lots of positive feedback and satisfaction from Ma villagers, visitors and local government officials and specially Mr. Tran Trung Kien, who has been directly involved in implementing this CSA practice. He shared that he can now maximize the utilization of his over 3000 m2 of his home garden in production of different fruit trees (pomelo, dragon fruit, guava) for sale, vegetables (cabbage, sweet potato, taro, onions, kohlrabi, green bean) for home consumption, forage grass for 10 cows, and making compost from cow dung. Mr. Kien's garden is really the best example for this CSA to be seen and adopted by farmers. - At least two more farmers in Ma have adopted part of this integrated home gardens CSA technology with their major focus on making compost from livestock dung and improving quality of their fruit trees, especially pomelo, through the pruning training course.

Partners: NOMAFSI

Links / Sources for further information:

<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0>

Project highlight 244

Title: Sustainable rice intensification



Author: Pham Thi Sen, Le Khai Hoan

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Participatory action research

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords: deep placement fertilizer, reduced rice density, monitored water use

Countries: Vietnam

Highlight description: - In 2016, the NOMAFSI team tested ICM (Integrated Cropping Management) and DFP (Deep fertilizer placement) techniques for both winter and summer rice seasons, and adjusted-rice inter-row space and maize transplanting technology for production of an additional maize crop after the summer rice. - 7 Cao Lan ethnic households volunteered to participating in testing of this CSA on an area of 6,130 m2. Details can be seen in the technical report made and submitted by NOMAFSI. - The NOMAFSI team organized numerous a training course on ICM and field day with 31 and 54 people participating, respectively, within and from the outside of Ma village.

Introduction / Objectives: To improve rice yield when reducing input and water use

Results: - A CSA group for rice sustainable intensification has been formed with 7 members - 31 farmers (inside and outside of Ma village) have been trained with ICM and DFP techniques - Farmers have seen and positively assessed the practices in terms of reduced fertilizer and pesticide use. - However, to change farmer's practice habit is not an easy task as farmers always have doubts about new technologies and feel more comfortable with their own.

Partners: NOMAFSI

Links / Sources for further information:

<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0>

<https://www.dropbox.com/s/5nhcgfdi5ije2uw/Final%20technical%20report%20CSV2016%20%20%20>

%2815-1-2017%29.pdf?dl=0

Project highlight 245

Title: Rice straw processing



Author: Pham Thi Sen, Le Khai Hoan	Subject:
Publisher:	Year reported: 2016
Project highlights types: • Participatory action research	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords: rice straw burning, effective micro-organisms (EM)	Countries: Vietnam
<p>Highlight description: - The burning of rice straw or agricultural residues after a harvest has been a serious cause adding to air pollution in many rural and peri-urban areas, including Ma. Most of the rice straw in Ma used to be burned and only a small part was kept by some farmers for cooking and/or feeding livestock. - The burning of rice straw is a waste of organic matter, which can potentially be processed to make bio-fertilizer for crops and vegetables, hence reduce input costs. - The CIAT and NOMAFSI project teams organized two technical trainings with two different methods on making bio-fertilizer from rice straw and agricultural residues with 50 farmers (inside and outside of Ma village) trained.</p>	
<p>Introduction / Objectives: To reduce the burning of rice straw in Ma village and make organic fertilizer for gardens and rice paddies</p>	
<p>Results: - The project team (CIAT and NOMAFSI) organized a CSA group with initial participation of 15 or more farmers - More farmers inside and outside of Ma have adopted the CSA practice but the number is not known - The burning of rice straw has reduced remarkably and to almost zero now. Farmers are happy about this technique because it is easy to do and they can have a big amount of bio-fertilizer for their home gardens and rice fields, therefore, can save cost for buying mineral fertilizers.</p>	
Partners: NOMAFSI	
Links / Sources for further information:	

<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0>

Project highlight 247

Title: Photovoice



Author: Bernadette Joven, Bui Le Vinh	Subject:
Publisher:	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Participatory action research • Successful communications 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords: climate change impact, daily lives and production	Countries: Vietnam
<p>Highlight description: To help achieve the target outcomes in the SEA region, complementary communication activities that are participatory, anchored on science-based interventions, and consider local contexts will be initiated specifically toward the promotion and adoption of prioritized climate-smart agriculture (CSA) options in a selected Climate-Smart Village (CSV) in Vietnam. Platforms and opportunities that will increase stakeholder involvement, engagement and accountability and initiate policy discourses will be explored toward influencing and reshaping existing policies and creating new ones that are feasible, pragmatic and suitable to the CSV. The project aimed to: - Increase and deepen the understanding of villagers in the CSV around local climate challenges and the vast CSA options available with the intention of stimulating their critical consciousness and be potential game-changers in their village. - Build the confidence and credibility of the workshop participants in discussing their climate change issues with relevant stakeholders particularly decision-makers and policymakers in their commune/district/province/country. - Engage the media in promoting CSAs in the CSVs through event coverage - Produce knowledge products and communication collaterals to be used by the local people in their communication, education and policy advocacy activities.</p>	
<p>Introduction / Objectives: To convey messages from Ma farmers related to the impact of climate change to their daily lives and production to provincial and district governments so policies for adaptation and resilience development can be aligned</p>	
<p>Results: - Invited guests and visitors were very interested in listening to and learning from the</p>	

exhibitors' stories and key messages. Interesting farmers-to-farmers and farmers-to-officials exchanges were observed during the exhibit panels (photos above). - The one hour dialogue after the exhibit between Ma farmers and the invited officials really gave the floor to discussion on various issues raised during the exhibit. Farmers were empowered to ask questions related to potential support and development policies from the Yen Bai government in helping the villagers mitigate the impacts of climate change they are faced with. The representatives from Yen Bai and Yen Binh DARDs untied some of Ma farmers' concerns and explained what support they are already providing and what can't really be done. A few initiatives really received their attention and possible support and policies could be mobilized to help solve the issues, such as an addition to the existing policy on forestry to help promote acacia livelihood development, support for extending livestock production, more flexible conversion from rice field to other more productive commodities, etc.

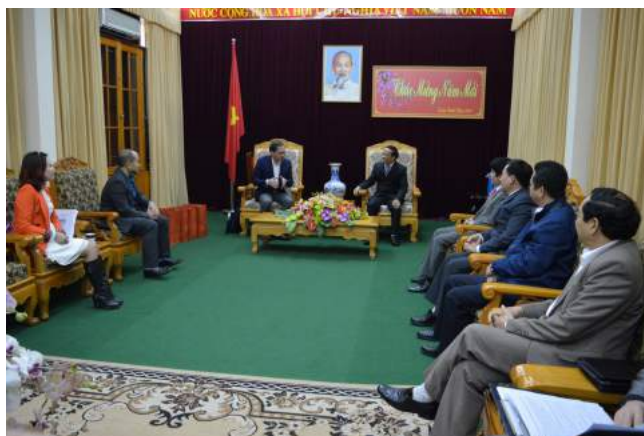
Partners: Yen Bai DARD, Yen Binh DARD, Van Yen and Van Chan DARDs, Vinh Kien commune

Links / Sources for further information:

<https://www.dropbox.com/s/3v5qriogi5zlv4v/20016%20CCAFS%20FP1.1%20Ma%20CSV%20report.docx?dl=0>

Project highlight 253

Title: Courtesy meeting with Yen Bai People's Committee and a MOU signed with Yen Bai DARD



Author: Dindo Campilan, Hoang Thu Thao, Bui Le Vinh

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Innovative non-research partnerships
- Successful communications

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords: Courtesy meeting, official partnership, CIAT's legal status, MOU

Countries: Vietnam

Highlight description: 1. The courtesy meeting with Yen Bai People's Committee happened on the 23rd of February 2016 with participation of CIAT Asia director - Dindo Campilan, CIAT Asia office manager - Hoang Thu Thao, and CCAFS FP1.1 project coordinator - Bui Le Vinh. Top ranking officials from Yen Bai government received the delegation from CIAT Asia. The two parties discussed about and agreed upon the partnership in research for development in Yen Bai province in the future through CCAFS FP1.1 project. Presents were then exchanged by the two partners 2. CIAT Asia and Yen Bai DARD then compiled, agree upon and signed the Memorandum of Understanding for CCAFS FP1.1 project in July 2016

Introduction / Objectives: 1. The courtesy meeting was the first official meeting between CIAT Asia and Yen Bai government to officially recognize the collaboration and partnership between the two partners for the CCAFS FP1.1 project and more projects in Yen Bai province in the future 2. The MOU signed with Yen Bai DARD was to officially set up a direct partnership with this technical department and identify activities and tasks of each partners within the framework of CCAFS FP1.1 project

Results: - The courtesy meeting was successful and the two partners agreed on the collaboration and partnership in implementing CIAT's research and development projects in Yen Bai province - The MOU between CIAT Asia and Yen Bai DARD was signed in July and Yen Bai DARD has been collaborating well with the CCAFS FP1.1 project team in implementing the project activities on the ground. Yen Bai DARD officials were invited to participate in multiple-stakeholder meetings and

important events in Ma. They are open to discuss matters related to agricultural development policies that may help Ma farmers in implementing CSA.

Partners: Yen Bai People's Committee, Yen Bai DARD

Links / Sources for further information:

https://www.dropbox.com/s/mp1rt4rvz5iwcdw/CIAT-Yen%20Bai%20DARD%20MOU_2003Word.doc?dl=0

Project highlight 266

Title: Scaling out CSA T&Ps



Author: Le Khai Hoan, Nguyen Tuan Cuong

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Participatory action research
- Capacity enhancement

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords: CSA training, outscaling CSA, ethnic farmers in Cao Bang province

Countries: Vietnam

Highlight description: A development project funded by the ChildFund Vietnam is working in Cao Bang province to teach farmers of different ethnicity groups different agricultural practices towards more sustainable and eco-efficient agriculture. The provincial coordinator contacted the CCAFS FP1.1 project team about a three day training course to train ethnic farmers in Cao Bang 3 interventions: vermicomposting, improved living bed for poultry and rice straw processing using effective microorganisms (EM). The training was planned in the last 2 months of 2016 and implemented in 3 different communes on 15-17 February 2017. The Cao Bang project team has planned to organize a cross visit to Ma for Cao Bang farmers to further learn the CSA work in Ma and cross check their results after 2-3 months implementing with those achieved by Ma farmers.

Introduction / Objectives: To train Cao Bang ethnic farmers three CSA T&Ps that were successfully tested in Ma in 2016

Results: <Not Defined>

Partners: <Not Defined>

Links / Sources for further information: Report of the training in Vietnamese:

https://www.dropbox.com/s/e09xlgh41v8lm6v/Training%20course%20on%20CSA%20T%26Ps%20in%20Cao%20Bang%20province_Vietnamese%20version.docx?dl=0

6. Activities

A171 - Planning for CSA assessment-priority setting and CSV-level M&E

Description: Developing protocols for assessment, priority setting and M&E Training-workshops for CSV implementation teams Monitoring and evaluation of CSA outcomes

Start date: Jan 2015

End date: Feb 2016

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Campilan, Dindo
<d.campilan@cgiar.org>

Status: Complete

Overall activity or progress made during this cycle: <Not Defined>

Deliverables in this activity:

<Not defined>

A173 - Action research for integrated agricultural technologies and practices -- 1st cycle

Description: Participatory action research with women-men farmers' groups and community-based organizations: - multi-season evaluation trials on CSA technologies and practices: (i) cassava-forage-legume, (ii) vermicomposting and improved living bed for poultry, (iii) integrated home gardens, (iv) climate-smart rice system, and (v) rice straw processing to making bio-fertilizer - training and capacity building for CSA stakeholders on the CSA T&Ps mentioned above provided to farmers of Ma and outside of Ma village - piloting CSA incentive mechanisms (institutional/services/resources): daily climate information provision to Ma village, climate micro-finance fund to help poor livestock farmers, and initiatives and incentives for drafting CSA-oriented policies at subnational level - learning-oriented monitoring and evaluation of action research: represented by farmer adoption rate that happen inside and outside of Ma village

Start date: Jan 2015

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Campilan, Dindo
<d.campilan@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: - Tested all 5 sets of CSA T&Ps mentioned - Established 5 community-based learning groups (or CSA groups) for these 5 sets of CSA T&Ps - Created a farmer-policy maker-scientist platform to dialogue on climate change impacts, relevant interventions can be taken to address, and policy alignments to achieving CSA goals - Community support and social inclusion: (i) daily agroclimate service information provision to farmers in both CSVs, (ii) climate micro-finance fund supporting poor women and farmers in Ma, and Biointensive vegetable school garden for kindergarten and primary schools in My Loi - Scaling-out activities happened and adoption was observed among farmers within and beyond both CSVs. However, the adoption rates were not documented and must be done in 2017 - Cross-CSV and CSV visits were organized for CSV farmers and researchers coming from national and international organizations in both CSVs - Blogs, reports and working papers were published

Deliverables in this activity:

<Not defined>

A181 - Action research for integrated agricultural technologies and practices - 2nd cycle

Description: Participatory action research with women-men farmers' groups and community-based organizations: - multi-season evaluation trials on CSA technologies and practices: acacia livelihood development, forage-livestock development in relation to crop production, integrated water management for rice production - training and capacity building for CSA stakeholders on the CSA T&Ps mentioned above provided to farmers of Ma and outside of Ma village - piloting CSA incentive mechanisms (institutional/services/resources): daily climate information provision to Ma village, climate micro-finance fund to help poor livestock farmers, and initiatives and incentives for drafting CSA-oriented policies at subnational level - learning-oriented monitoring and evaluation of action research: represented by farmer adoption rate that happen inside and outside of Ma village

Start date: Jan 2016

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Campilan, Dindo
<d.campilan@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: - Validation studies were made for all 3 CSA T&Ps in 2016 and the testing activities will happen on 2017 - 10+ training courses and field school days organized in each village for farmers inside and outside of Ma and My Loi - Important multi-stakeholder meetings among farmers, policy makers and project researchers were organized in both CSVs to update and dialogue on project activities, results and possibilities to mainstream project outcomes to policy making process - Community support and social inclusion mechanisms will continue in 2017 and more activities will be generated when and where needed - Farmers not involved in the M&E of CSA T&P implementation of 2016 will be more inclusive in the process of 2017 to generate data on effectiveness and adoption rates of CSA T&Ps in both CSVs

Deliverables in this activity:

<Not defined>

A182 - Knowledge sharing, outscaling and communications

Description: Development of knowledge products for sharing project results beyond the CSVs and to influence similar initiatives across Southeast Asia - consolidation of training materials for the CSA T&Ps: cassava-forage-legume, vermicomposting, integrated home gardens, rice straw processing to making bio-fertilizer, poultry health improvement through improved living bed, climate-smart rice system, acacia livelihood development, forage-livestock development in relation to crop production, integrated water management for rice production - organizing cross-CSV visits to scale out CSA work to countries in the region, such as Philippines, Laos, Cambodia - publishing CSA works in the form of blogs, policy briefs, reports, working papers and international refereed papers

Start date: Jan 2017

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Bui, Vinh Le
<V.Bui@CGIAR.ORG>

Status: On-going

Overall activity or progress made during this cycle: - Ma CSV team made 7 training manuals for farmers and local extension officers. My Loi CSV team is compiling training materials for the training delivered - Ma CSV team participated in 2 cross CSV visits to Philippines and Nepal and co-organized a CSV roving workshop in Ma and My Loi which was also co-organized by My Loi CSV - Ma CSV team co-authored a CSA sourcebook led by IIRR, entitled "Towards climate resilience in agriculture for Southeast Asia: an overview for decision-makers" and published 2 blogs on CCAFS, CIAT websites and contributed to 2 blogs on MIT Technology Review, and Columbia University websites - Ma CSV team contributed to 2 other works of year-end project M&E and Photovoice which will be published as CCAFS papers/reports in 2017

Deliverables in this activity:

<Not defined>

7. Leverages

No leverages added

Title: Tailored Agro-Climate Services and food security information for better decision making in Latin America

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2018	RP LAM	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2, Bilateral	On-going	CIAT - Centro Internacional de Agricultura Tropical - Colombia	Giraldo, Diana <d.giraldo@cgiar.org>

Project is working on

Flaship(s)
F4 (before F2 - James): Climate services and safety nets

Region(s)
LAM: Latin America

Project summary

Whilst in other regions of the world there are a range of initiatives related to agroclimatic forecasting, there is a big gap in Latin America, which provides a tremendous opportunity to contribute with a targeted and well-integrated initiative to make a difference in agroclimatic information (based on historical analyses, monitoring systems and agro-climatic forecasts). In this sense, we propose to jointly develop and implement with national stakeholders, innovative approaches and tools based on local and scientific information for improving climate risk management by (i) taking into account gender aspects and simple food security indicators, (ii) combining local data on agroclimatic information with seasonal forecasts, (iii) improving information formats and delivery to decision-makers and farmers and (iv) strengthening and promoting the elaboration of policies, establishing a robust climatic indices to support and improve ongoing agricultural insurance pilot project.

2. Partners

Partner #1 (Leader)

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Giraldo, Diana <d.giraldo@cgiar.org>	Develop an effort to integrating climate forecasts with the crop models linked with appropriate decision and discussion support tools, could substantially improve operational decision making in agricultural management. Dissemination mechanisms for farmers: innovative ?formats? of products, "translating? climate information into agronomically relevant information and improved knowledge.	HQ
Partner	Blundo, Genowefa <g.blundo@cgiar.org>	Collect information and design mapping networks in Colombia in order to understand current information flows and decision-making cycles, demand and gaps throughout the entire production chain of the involved maize and bean crops (from cultivar selection, to crop production, to consumption).	HQ
Partner	Llanos, Lizeth <L.Llanos@cgiar.org>	Development of an interface: Rclimtool who provides statistical analysis of agroclimatic data, in which the user can analyzing with timely information (meteorological stations and satellite) for decision making in crop and comparing and testing the different tools (Flagship 4-supported tools) for meteorological data quality control and for connecting seasonal forecasts with crop models.	HQ

Partner	Alvarez Toro, Patricia <p.alvarez@cgiar.org>	Taking into account the prioritization of crops, the available historical information of the institutions is collected and we proceed to evaluate, calibrate and run the crop models. Once this information is available, we proceed to determine the impacts of extreme events on the prioritized crops, through agro climatic indicators in order to reduce climate-related vulnerabilities and/or take advantage of environmental conditions in a better way.	HQ
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Partner #2

Institution: BIOVERSITY - Bioversity International

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Coordinator	van Etten, Jacob <j.vanetten@cgiar.org>	Bioversity in Costa Rica has experience working on climate change adaptation and agroecological resilience at the local scale, treating food security as a socioeconomic problem more holistic than just agricultural yields. They work in scaling up local solutions, implemented an innovative approach to collect climate and food security information at the household level, using a sentinel site surveillance system that takes account of gender and social differentiation, information needs analysis, and crop production aspects. CATIE) involved in the	Cali, Colombia
Project Coordinator	Muller, Anna <anna.muller@cgiar.org>	-	HQ

Partner #3

Institution: CIP - Centro Internacional de la Papa

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Quiroz, Roberto <r.quiroz@cgiar.org>	Partners who are now not part of the project: CIP contributed to the evaluation of sources and methodologies for the correction of satellite precipitation products in 2015, before budget cuts.	HQ

Partner #4

Institution: ILRI - International Livestock Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Van Wijk, Mark <m.vanwijk@cgiar.org>	Partners who are now not part of the project: ILRI worked on collecting information for the article of The Rural Household Multi-Indicator Survey (RHoMIS) for rapid characterisation of households to inform climate agriculture interventions to Guatemala in 2015.	HQ

Partner #5

Institution: ACF International - Action Contre la Faim

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Gaytan, Ada <agaytan@ca.acfspain.org>	ACF's actions regarding food security and livelihoods? consists of saving lives in crisis situations and protecting and preserving the means of existence for communities at risk. Lead field implementation and facilitate institutionalization processes in Guatemala. Action Contre la Faim (ACF) has implemented an innovative approach to collect climate and food security information in the field, using a sentinel site surveillance system.	HQ

Partner #6

Institution: CATIE - Centro Agronómico Tropical de Investigación y Enseñanza

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Imbach, Pablo <pimbach@catie.ac.cr>	Collect and produce new data products/pipelines, integrating socio-economic/ climate data for Honduras and Guatemala	HQ

Partner #7

Institution: FENALCE - Federación Nacional de Cultivadores de Cereales

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Duarte, Carmen Julio <cduarte@fenalceregional.org>	The Federación Nacional de Cultivadores de Cereales y leguminosas (FENALCE) help to identify what the need farmers in order to planning the products that will assist them the decision making, as well as the better way to transmit the project results to the farmers and evaluate the impact and usability of each technology that will be developed. On the other hand, this partner will play an important role supplying the agronomic information that will be required to use and validate the different crop models that will be used.	HQ

Partner #8

Institution: Columbia University-United States

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Baethgen, Walter <baethgen@iri.columbia.edu>	IRI will contribute with the improve transparency and performance of climate forecasts in Colombia and the transfer of information to agricultural terms (CADMT), implementation of a regional observatory under the Maproom platform, for improved climate risk management in Colombia.	HQ

Partner #9

Institution: MADR - Ministerio de Agricultura y Desarrollo Rural

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Ruiz, Alejandro <alejandro.ruiz@minagricultura.gov.co>	AGRONET Colombia was conceived by the MADR to form a network of integrated and decentralized information and communication that can provide timely and synthetic strategic information to those responsible for making political decisions in the sector at the same time, provide the various actors in the agro-chain - with special attention to small producers - the contribution is to give recommendations based on agro-climatic information of AgroClimas/CCAFS projects, using mechanisms of information transmission preferred by farmers as SMS.	HQ

Partner #10

Institution: IDEAM - Instituto de Hidrología, Meteorología y Estudios Ambientales de Colombia

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Ruiz, Jose Franklyn <jruiz@ideam.gov.co>	.	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	Overall, we had a very positive experience with CATIE, FENALCE, MADR, IRI and ACF. For 2017, we will continue to work with the same partners in 2016 adding to meteorological service (IDEAM) in Colombia and Honduras. We will be working more closely with Walker Institute – University of Reading. MADR of Colombia, SAG of Honduras. Colombian and Honduran NARS. COPECO. FEDEARROZ and FENALCE which were trained on agro-climate information generation, and now use the information and lead some of the Local Technical Agro-climatic Committees (LTACs)

Partnerships overall over the last reporting period:

We worked closely with our local partners to strengthen contacts and cooperation with relevant national meteorological services. CATIE and ACF during 2016 are valuable partners in Guatemala as they assure good relationship with SESAN at the central level and in the regions, and FENALCE, and CIAT's bean breeding team helped with their expertise to develop project outputs and are very important when it comes to project outcomes. During the government transition in Guatemala, our partners were of great help. CIP (budget cuts) and ILRI only contributed to the work in 2015, and they are not part of the project now.

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Country			Colombia
Country			Guatemala
Country			Honduras
District	6.5583	-73.1511	San Gil
District	6.6668	-73.1737	Villanueva
District	6.6361	-73.2431	Barichara
District	8.8748	-75.7965	Cerete
District	6.6006	-73.0824	Curiti
District	8.9644	-75.824	San Pelayo
District	8.8078	-75.5586	Cotorra
District	9.2393	-75.8171	Lorica
Province	14.65530500429711	-89.98190307617193	Chiquimula
Province	14.811554740618282	-89.54333496093756	Jalapa
Climate Smart Village Sites	14.99	-89.2	Santa Rita
District	4.699727125641391	-118.73124999999999	Jocotán (GTM)
District	4.699727125641391	-118.73124999999999	Camotán (GTM)
District	4.699727125641391	-118.73124999999999	Olopa (GTM)
District	4.699727125641391	-118.73124999999999	San Juan Ermita (GTM)
District	4.699727125641391	-118.73124999999999	Chiquimula (GTM)
District	4.699727125641391	-118.73124999999999	Jalapa (GTM)

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:

(1) Private/Public sector stakeholders in at least two countries use validated tools for Agro-Climatic Risk Management in the elaboration of public policies and in decision-making to evaluation of adaptive strategies. The provision of information tailored to end users will increase the adoption of these tools. The farmer associations access agroclimate forecasts, reaching 60000 of farmers. (2) Agricultural extension services make recommendations based on agro-climatic information using innovative mechanisms adapted to the specific conditions and to the identified needs of the different farmer communities. (3) Sentinel sites produce validated data in a cost-efficient way and produce and deliver climate and food security information. (4) Gender-disaggregated user feedback on new information products leads to increased control, by women and other marginalized groups, of assets, inputs, information and decision-making, will measure changes in the gender/social differentiation gap in access to climate and food security information.

Annual progress towards outcome (end of 2016*): By the end of 2016, will be incorporated new indicators in the SESAN in Guatemala. Improving the data analysis to make the process more user-friendly and to help consolidate and institutionalize by the Ministry (MADR) in Colombia the local and national Network of Technical Committees Agroclimatic, where the results of agroclimatic models will be discussed and validated at each table and then the newsletter with the conclusions (measures of adaptation strategies) will be created

Annual progress towards project outcome in the current reporting cycle (2016*): During regular Agroclimatic Technical Committees with local stakeholders, previous forecasts of precipitation and temperature are checked against observed data from the stations located in the agricultural zones, satellite data from CHIRPS, and visual observations done by the local community itself. Based on this process, the climate forecasts are validated qualitatively month by month in a participatory manner. The false alarms are analyzed and in this way, corrections are introduced to improve the climate forecast process and to better understand the predictability barriers in some zones or periods of the year. The information generated with the tools of agroclimatic prediction, is translated in conjunction with the extension services to guarantee the sustainability, the strengthening and the appropriation of these tools to the local communities; implementing a process of learning and change of practices in the field that helps to improve decision making. CCAFS hired a researcher to work closely with SAG in Tegucigalpa-Honduras. Result: SAG established the Local Technical Agro-climatic Committees (LTACs) Honduran-network. In 2016, SAG established six LTACs SESAN is currently evaluating an information system prototype that we designed to support data collection and decision making at the municipal level. The prototype is based on the use of data from sentinel site communities and other sources. Based on our research, the food security indicators were re-evaluated and included. We developed a ranking of the indicators to facilitate decision-making. The prototype includes a document to guide data collection, evaluation, decision-making and information distribution on the municipal level. We expect the final decision on the countrywide implementation of the prototype in April 2017. Further research allowed us

to elicit which indicators are important at specific stages of food security emergencies, which allows to further customizing agroclimatic and food security information.

How communication and engagement activities have contributed to achieving your Project

outcomes:* Permanent dialogue with FENALCE and field workers from i.e. producer's associations, cooperatives in order to corroborate the theoretical assumptions using local knowledge/experience, use of local data inputs to calibrate models as close as possible to context-specific conditions, and build capacity at the local level. SESAN was undergoing a long transition process from January until September 2016. This brought insecurities about the programs the government would focus on in the next four years. Constant communication with SESAN, invited delegates for discussion to understand SESANs needs. This helped us to go with the transition and place our research where it is needed.

Evidence documents of progress towards outcomes:* <Not Defined>

Annual progress towards outcome (end of 2015): By the end of 2015, gender roles, social differentiation, key nodes and mapping information flows in Colombia and Guatemala will be identified throughout the entire production chain of maize and bean; from cultivar selection, cultural management practices, crop production and consumption. This information will be used as baseline to identify gaps and tailor agro-climatic information to the requirements and demands of farmers for their usability. This process will be facilitated by knowledge exchange and preliminary analysis of the household survey data ready to show gender aspects of access to food, showing participation of women in sentinel sites.

Annual progress towards outcome (end of 2017): By the end of 2017, More than 35,000 farmers and institutions of public / private sector know the local and national agroclimatic newsletter through diffusion mechanisms (round tables, SMS, web, bulletins, newspapers, videos) and use it as support for decision-making in the applications adaption strategies with the implementation and validation of agro-climate forecast pilots given during the mid 2015 -2016.

Annual progress towards outcome (end of 2018): By the end of 2018, web site to assess agro-climate risks in Colombia will be available. The website will provide information for different types of users about environmental conditions (past, present, future) for each region growing bean and maize. The web page outputs will be automatically updated every time there is new information available, which will assist users to plan future activities.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* In 2016, Bean seed multiplication selected by farmers in workshops. In 2017 will be delivered improved germplasm (bean) to 600 farmers, and adaptive measures to ensure increased productivity, improve their planning and decisions and to adjust their production systems to minimize losses in unfavorable seasons and to take advantage of opportunities in the favorable ones, through partnerships with local grower associations.

4.2 CCAFS Outcomes

RP LAM Outcome 2019: Meteorological Services generate tailored climate information for decision-makers both at national and local level. Ministries of Agriculture generate and communicate tailored agro-climate services through extension services to help smallholder farmers to reduce climate risks, as well as food security information to create informed safety nets. Research institutions develop demand-driven insurance options based on agro-climate information, seed markets, and CSA context-specific options. Private Sector contributes to the development and implements insurance options for smallholder farmers.

Indicator #1: Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities

2019
<p>Target value: 3</p> <p>Cumulative target to date: 8</p> <p>Target narrative: - Colombia, Honduras and Guatemala, the goal is to reach 2200 users of RClimTool, through a web-based platform. -The agricultural extension services make recommendations based on agro-climatic information using innovative outreach mechanisms adapted to the specific conditions and to the identified needs informing 60000 number of farmers to take production decisions. With AGRONET sent 280,000 SMS reporting of results, developments, events and news related to the project AGROCLIMAS,</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: Guatemala will have a fully implemented food security information system that systematically distributes tailored information about crop production and seasonal climate forecasts to inform decision-making about food security safety nets at local, regional and national levels.</p>

2015

Target value: 3

Cumulative target to date: 3

Target narrative: - FENALCE the National Federation of Cereal and Legume Growers understood current current flows of knowledge information, demand and gaps, decision-making cycles in which climate and food security information is used or potentially used in government, non-governmental organizations, rural families. This mapping of information will allow to better identify sources of information and key players that will enable them to make better decisions. -MADR the Ministry of Agriculture and Rural Development through of AGRONET, will develop a communication strategy results to key decision makers in the Colombia government, involved in the chain of maize and bean crops. -SESAN has articulated a clear vision for the national food security information system, including the needs for products derived from CCAFS science, based on a solid assessment of user requirements and needs. A mapping networks to support the elaboration of public policies with these three institutions, in order to understand current information (agro-climate and food security), demand and gaps.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 2

Cumulative target to date: 5

Target achieved: 7.0

Target narrative: -SESAN has identified a new validated set of key indicators to monitor food security based on household food security analyses done by CCAFS scientists. FENALCE and agricultural extension uses the databases and tools developed by CCFAS. Where RClimTool will become the main reference to increase their knowledge and skills about the use and statistical analysis of climatic information which will allow them to understand and characterize the climatic condition and the relationships with agricultural information of each of the areas and so, they generate agroclimatic newsletters.

Narrative for your achieved targets, including evidence: With our support, SESAN identified and weighed key indicators for the FEWS that are used in data collection instruments in sentinel site and the situation room at municipal level. SESAN is testing a country-wide information system based on the improved indicators. New partnership between CIAT, IDEAM, and Fedearroz in Colombia will enhance current dynamical modelling capabilities and allow for better seasonal climate prediction. RClimTool can generate climate scenarios and thus, farmers can make timely decisions in order to prevent damage to their crops" said chief executive officer of Sierra y Exportadora Selva, Alfonso Velasquez on Economic Cooperation Forum Asia-Pacific (APEC).

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS

outcome: SESAN and other partners at the local and municipal level participated in a gender study to better understand gender roles in decision-making processes in community groups. SESAN is aware of the importance to consider gender and social inclusion for the production of reliable information in the FEWS. Gender roles, social differentiation, and mapping information flows was identified. This information was used to identify gaps and gender-disaggregated feedback on new agro-climate products, facilitated by knowledge exchange and preliminary analysis of the household survey (600 farmers) data ready to show gender aspects to empowerment indicators on decision-making and adoption.

The expected annual gender and social inclusion contribution to this CCAFS outcome: By the end of 2016 In order to achieve the proposed outcomes we assume that local and national governments (such as Pacto Hambre Zero in Guatemala), development agencies such as The World Bank and USAID, and large grower associations (such as Fenalce) with all of whom we have ongoing partnerships, will increase their efforts for embedding climate risk management approaches and tools into their activities to enhance the adaptive capacity of production systems and improve food security in the region.

Indicator #2: Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

2019
<p>Target value: 2</p> <p>Cumulative target to date: 2</p> <p>Target narrative: By the end of 2018, web site to assess agro-climate risks in Colombia will be available. The website will provide information for different types of users about environmental conditions (past, present, future) for each region growing bean and maize. The web page outputs will be automatically updated every time there is new information available, which will assist users to plan future activities.</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: NAColombia FENALCE and at least two gremios (growers federation) more, will have a validated functional system to provide real-time weather information and agro-climatic forecasts through automated bulletins giving farmers through extension services, reliable information about: When to plant? When to harvest? Which variety to choose? Irrigated or rainfed use? Density of sowing?</p>
2015
<p>Target value: 0</p> <p>Cumulative target to date: 0</p> <p>Target narrative: Initially a diagnostic (baseline) will allow the next users to better identify sources of information and key players that will enable them to make better decisions.</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2016

Target value: 0

Cumulative target to date: 0

Target achieved: 1000000.0

Target narrative: Improving the data collection processes, databases and data analysis (Scripts in R) to make the process more user-friendly and to help consolidate the network at local and national level so that the information feeds into decision-making on food security, agroclimatic information at all levels. Will collect the information of risks associated with climate for crops of beans and maize, as a first approximation of insurance based on climatic indices.

Narrative for your achieved targets, including evidence: In 2016, USD 1,000,000 USAID investment the development of climate services Colombia as one outcome of a national scale, participatory priority setting process that identified a preliminary climate service needs spanning many sectors and the scope of the AgroClimas project. This particular effort supports the broader agenda of Climate Services for Resilient Development. Characterization of maize, bean and rice growing environments in Colombia, Establishment of a new agro-climatic roundtable in Santander, the 6th in Colombia, and automation of the seasonal climate forecasting software CPT in R and training to 2 farmer organizations and the Colombian Meteorological Service (IDEAM)

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS

outcome: To strengthen, and organize capacities to improve climate risk management for improving household income and will facilitate knowledge exchange between farmers from different countries within LAM, through the partnerships and new investments to ensure increased productivity through soil/crop management practices.

The expected annual gender and social inclusion contribution to this CCAFS outcome: NA

Major Output groups:

- F4 (before F2 - James): New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries
- F4 (before F2 - James): New knowledge, capacity, and tools supporting the provision of equitable climate services for farmers are developed
- F4 (before F2 - James): Weather related Insurance products are designed, tested, and brought to scale with implementing partners
- F4 (before F2 - James): Decision support systems improved or developed for incorporation into national food security safety net programs
- F4 (before F2 - James): Evidence and knowledge products synthesizing national gaps and opportunities to guide regional and global investment in climate informed agricultural and food security decision-making

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:

1. Contribute to a research agenda with the others projects in Flagship 2 to identify common interests 2. Access to climate information, which is addressed by linking to extension services and local communities. 3. Increase access to food in areas where extreme events affect, by improving the planning for emergency relief through better and more timely delivered indicators 4. Demonstrating the value of integrating information on climate variability and extremes into agro-meteorological packages. 5. Establishing participatory early warning systems, improving insurance programs and implementing communities of practice to build seasonal forecast network. 6. Informing farmers through conventional communication channels.

Collaborating with other CRPs

<This project does not have a CRP selected yet.>

4.4 Case Studies

Case Study #77

Title: Colombian agricultural sector adapts to climate variability with CIAT-CCAFS facilitated data collection, dissemination and science

Year: 2016

Project(s): P112

Outcome Statement: CIAT-CCAFS agroclimatic prediction science has changed how agricultural sector organizations (e.g. farmer associations: Fedearroz, Fenalce; NARS: Corpoica; private research organizations: Cenicafe), generate and share climate variability adaptation recommendations. Through Technical Agroclimatic Committees (MTA), organizations from different agricultural sectors discuss, share, and integrate knowledge to tackle climate variability in MTA regions (Santander (new 2016), Cordoba, Sucre, Cauca, Magdalena, Eje Cafetero). National and Regional Agroclimatic Bulletins are produced using information generated in the MTAs. The bulletins democratized climate information in the country.

Research Outputs: CIAT-CCAFS developed underpinning science that enabled the widespread and sustained use of site-specific agro-climatic forecasts. Delerce et al. (2016) demonstrated that 30–50% of the rice yield variability can be explained by 3–4 climatic factors that can be managed with site-specific recommendations. Similarly, Esquivel et al. (in prep.) (<https://goo.gl/d8weKg> and <https://goo.gl/2KCPXo>) have demonstrated that forecast skill in Colombia is good enough to produce recommendations for various rice and maize regions. The effort included calibration and validation of rice, maize and bean models for Colombian conditions (Barrios, 2016). These findings and tools were co-developed with national stakeholders. CIAT-CCAFS scientists assessed information needs in Santander, Cordoba, Tolima, Valle del Cauca, and Meta (<https://cgspace.cgiar.org/rest/bitstreams/73612/retrieve>), which has been key for delivering user-tailored services and identifying and inviting MTA participants. For bean producers, agronomic practice manuals were produced, CIAT-CCAFS science to accompany forecasts (<https://cgspace.cgiar.org/handle/10568/76299> and <https://cgspace.cgiar.org/handle/10568/76613>). and Departmental government installed the MTA to accompany farmers <https://goo.gl/7WPDZC>

Research Partners: La Corporación Colombiana de Investigación Agropecuaria (Corpoica) Universidad de San Gil UNISANGIL IRI – Columbia University Centro de Investigación de la Caña de Azúcar (Cenicaña) Centro de Investigación de Café (Cenicafe)

Activities: CIAT-CCAFS drove the establishment of 6 Technical Agroclimatic Roundtables (MTA), including the most recent one in Santander. There is also a National-level MTA. Through the MTAs, local and national governments, farmers' associations (Fenalce, Fedearroz, FNC, Cenicaña) and other participating institutions (universities, Corpoica) have institutionalized CIAT-CCAFS climate information into their decision making. CIAT-CCAFS science and capacity building on crop modelling and seasonal climate prediction enabled national partners, notably Fedearroz and Fenalce, to analyze local conditions and produce and disseminate seasonal agro-climatic forecasts across maize and rice producing regions. MTA participants continue monthly meetings to share forecasts now produced by their own teams. For example, Fedearroz and Fenalce now have teams of 5 people producing, interpreting and delivering monthly forecasts. During 2016 the national technical agroclimatic committee was realized, generating the monthly bulletins, completing two years of this initiative led by CIAT / CCFAS, MADR, IDEAM and 27 participating institutions.

Non-Research Partneres: Federación Nacional de Cultivadores de Cereales y Leguminosas (Fenalce) Federación Nacional de Arroceros (FEDEARROZ) Federación Nacional de Cafeteros (FNC) Asociación de Bananeros del Magdalena (ASBAMA) Instituto de Hidrología, Meteorología y Estudios Ambientales (IDEAM) Ministerio de Agricultura de Colombia

Output Users: Next user –technicians and researcher's farmer associations and gremios use agro-climatic prediction tools End users – Farmers of national federations and gremios. In long term, potentially more than 500000 farmers. Ecosaga – Environmental responsibility commercial association

Evidence Outcome: Outcome Harvesting Report: How Colombian Agriculture Producers in Various Sectors Benefit from National Agroclimatic Bulletins and Technical Agroclimatic Roundtables , by Kemly Camacho. 2016. Evidence of the use of agronomic manuals is attested by the number of page views and downloads (>3,500 views and >1,000 downloads each).

Output Used: Research outputs were used to build capacity in farmers' organizations as well as in IDEAM. Regional MTAs operate sustainably to analyze the national bulletin and localized climate forecasts and agronomic recommendations. Within the MTAs, outputs from CIAT-CCAFS research are shared and relationships between regional actors (farmer associations/public/private institutions) are facilitated.

References Case: Blundo Canto, G; Giraldo, D; Alvarez-Toro, P; Perez, L; Gartner, C. 2016. Local, reliable and timely agro-climatic information: a requirement of Colombian farmers. CCAFS Info Note. Available at: <https://ccafs.cgiar.org/fr/node/52420#.WKHbBDKZNo4> Delerce, S., Dorado, H., Grillon, A., Rebolledo, M.C., Prager, S.D., Patiño, V.H., Garcés Varón, G., Jiménez, D., 2016. Assessing Weather-Yield Relationships in Rice at Local Scale Using Data Mining Approaches. PLoS One 11, e0161620. Esquivel, A; Ramirez-Villegas, J; Llanos, L; Agudelo, D; and Fernandes, K; Rojas, A; and Ruiz, F. in prep. Predictability of Colombian rainfall assessed by canonical correlation analysis. Jara C; Giraldo D. 2016. Manejo agronómico de frijol. Cartilla 1. CIAT. Cali, Colombia. 8 p. Available at: <https://cgspace.cgiar.org/handle/10568/76299> Jara C, Cotes CA. 2016. Manejo agronómico de frijol. Cartilla 2. Cali, Colombia: CIAT. Available at: <https://cgspace.cgiar.org/handle/10568/76613> CCAFS. 2015. Mesas Técnicas Agroclimáticas. Available at: <https://ccafs.cgiar.org/es/mesas-tecnicas-agroclimaticas#.WKXWAm8rJhE> Barrios, C. 2016. Zonificación agroclimática para el arroz de riego en Colombia. MSc Thesis.

Primary 2019 outcome indicator(s):

- Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities
- Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

Link between outcome story and and the FP Outcome(s): <Not Defined>

Annex uploaded:

Case Study #82

Title: 330.000 farmers in Honduras and Colombia use tailored seasonal forecasts+recommendations to adapt to climate variability

Year: 2016

Project(s): P42

Outcome Statement: MoAs of Honduras and Colombia are reaching-up to 330.000 farmers through 9 Local Technical Agro-climatic Committees (LTACs). LTACs provide recommendations generated through local-scientific knowledge-exchange using agro-climatic information to support decision-making. The initiative started as a project led by CCAFS in Colombia and based on the successful experience it was adopted by MoA in Honduras. Representatives from government, civil society, local-authorities, meteorological-services and farmers attend these committees to discuss climate-forecasts to decide which climate-smart practices should be undertaken.

Research Outputs: Main research results are related to downscaled agro-climate information which is disseminated widely among farmers and local institutions in an understandable language [output-1], and LTACs methodology [output-2] developed by CCAFS, that provides concepts and methods to enable dialogue between scientists, local-actors and farmers through a knowledge platform using agro-climatic information and recommending CSA-options. Other research outputs used to achieve the outcome include: Results on the identification of key actors along CIS components (generation/translation/transference/use) [output-3]; Results on high climate vulnerability mainly related to low-adaptive capacity and lack of information inputs for decision-making processes in Honduras [output-4]. Colombia used this output to decide on leading a south-south learning-process with Honduras; Results on Honduran agricultural sector diagnostic on priorities regarding risk management in which agro-climatic information was a prioritized [output-5]; and Results on multilevel-stakeholder-analysis in Honduras [output-6] which showed the MoA as the key actor to lead agro-climate information efforts to reduce risks.

Research Partners: International Center for Tropical Agriculture (CIAT) leads the generation of agro-climate information and brings expertise on crop management to support the Secretariat of Agriculture and Livestock of Honduras (SAG) and the Colombian Ministry of Agriculture and Rural Development (MADR). CIAT also supports capacity building of Colombian producer associations. CIAT's research partners include IRI regarding climate research. Colombian and Honduran NARS (Corpoica and DICTA) are also an active part of the process, Corpoica coordinates some LTACs and DICTA technically supports InfoAgro (SAG's information area) on CSA recommendations.

Activities: Process started in 2013 when CCAFS facilitated an exchange-experience between Senegal–Colombia–Honduras. A delegation from Colombia-Honduras visited Senegal to learn how climate-information was helping farmers to adapt to climate-variability. In 2014, a Senegal-Honduras delegation visited Colombia to continue the learning-process. Then, CCAFS and MADR initiated in Colombia the LTAC-project in 2015. Afterwards, Colombia included in its-NDCs the establishment of 15-LTACs as a measure to promote food-security, enhance-adaptation and reduce GHG-emissions. In 2015, a Honduran delegation visited Colombia to learn about the LTAC initiative, months later the Minister of Agriculture and Livestock-SAG of Honduras visited CIAT to sign a collaboration-agreement. Agreement implementation began early-2016 with a sub-national strategy which CCAFS helped to develop. Also, a training program on climate-prediction and crop-modelling led by CIAT-CCAFS was carried-out targeting Honduran-technicians. CCAFS hired a researcher to work closely with SAG in Tegucigalpa-Honduras. Result: SAG established the LTACs Honduran-network. In 2016, SAG established six LTACs.

Non-Research Partneres: • Ministry of Agriculture and Rural Development (MADR) of Colombia • FEDEARROZ and FENALCE (rice and cereals producer associations) • Secretariat of Agriculture and Livestock (SAG) of Honduras • Permanent Commission of Contingencies in Honduras (COPECO) benefited from training program on climate prediction and crop modelling led by CIAT targeted to government personnel in Honduras. • U.S. Department of Agriculture (USDA) and Inter-American Institute for Cooperation in Agriculture (IICA) have financially supported SAG in the implementation of the LTACs strategy.

Output Users: MADR of Colombia, SAG of Honduras. Colombian and Honduran NARS. COPECO. FEDEARROZ and FENALCE which were trained on agro-climate information generation, and now use the information and lead some of the LTACs. Colombian and Honduran representatives of public and private institutions, local government, academia, civil society, farmers' associations and farmers.

Evidence Outcome: Letter of acknowledgment to CCAFS-support in Honduras. A)External-evaluation on Local-Technical Agro-climatic-Committees in Colombia-[reference#7] B)Colombian-INDCs(pag.6). 2015 in which 15-LTACs are prioritized to achieve adaptation-national-goals-[reference#12] C)National-Strategy for Adaptation to Climate-Change in Honduran Agri-food-sector (in which the government prioritizes agro-climatic services). English-summary attached-(Annex1-pag.1). D)Honduran government official-communications-[reference#8]. Annex1-english-summary attached. E)Case study Senegal-Colombia south-south exchange-[reference#13]

Output Used: MADR leads LTACs in Colombia based on [output-2] with local-coordination by FEDEARROZ, FENALCE and Corpoica, which also disseminate [output-1] widely in their networks aiming for losses reduction on crop production. Using [output-3] both MADR and local-coordinators know about effective mechanisms to provide information to farmers and channels to disseminate it.

References Case: Note: Given that most of the content is in Spanish, please see-the annex for reference. [1]Local agro-climatic bulletins <https://ccafs.cgiar.org/es/boletin-agroclimatico-regional> [2]Paper“Bridging the Gap between Climate Science and Farmers in Colombia” (submitted: Climate-Risk-Management-Journal in annex 2-attached) [3]Blundo et-al.(2016).Mapeo de Actores y Necesidades Información-Agroclimática en Maíz y Frijol en sitios piloto-Colombia. <https://ccafs.cgiar.org/es/publications/mapeo-de-actores-y-necesidades-de-informaci%C3%B3n-agroclim%C3%A1tica-en-los-cultivos-de-ma%C3%ADz-y#.WKHV5m997IU> [4]Bouroncle et-al.(2015).La agricultura de Honduras y el cambio climático: ¿Dónde están las prioridades para la adaptación <http://hdl.handle.net/10568/45943>. [5]Vasquez et al.2014.Estatus de la gestión de riesgos climáticos en el sector agroalimentario y su importancia para la seguridad alimentaria y nutricional en Honduras. <http://hdl.handle.net/10568/35120>. [6]Castro et-al.2015.Mapeo de la influencia de los actores sociales de diferente nivel para Centroamérica: cambio-climático y agricultura. <http://hdl.handle.net/10568/70215>. [7]External evaluation on Local Technical Agro-climatic Committees https://ccafs.cgiar.org/sites/default/files/projects/attachments/LTAC_case_in_Colombia_2016.pdf [8]VIDEOS: Honduran-President-speech <https://youtu.be/HHDsP92xDXU?t=6m38s> and SAG officer-interview <https://youtu.be/8rmcWMXZc2o> [9]Revista-Productor-Agropecuario.2016.¿Cómo-lograr-pronósticos-agroclimáticos-útiles? <http://revistaproagro.com/lograr-pronosticos-agroclimaticos-utiles/> [10]SAG LTACS-Website: <https://ccafs.cgiar.org/local-technical-agroclimatic-committees-honduras-sag-honduras> [11]CCAFS.2016.Agroclimatic-information: a commitment-to-innovate and increase-food-security <https://ccafs.cgiar.org/blog/agroclimatic-information-commitment-innovate-and-increase-food-security> [12]Colombian-INDCs <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Colombia/1/Colombia%20iNDC%20Unofficial%20translation%20Eng.pdf> [13]UNEP, Case-study "Innovative climate approaches for smallholder farmers" Senegal-Colombia south-south exchange <http://www.unep.org/south-south-cooperation/case/casefiles.aspx?csno=141>

Primary 2019 outcome indicator(s):

- Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities
- Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

Link between outcome story and and the FP Outcome(s): <Not Defined>

Annex uploaded:

https://marlo.cgiar.org/data/ccafs/projects//112/caseStudy/P112%20OCE%2082%20Outcome%20evidence_f.pdf

Case Study #104

Title: Information design improves decision making in Food Security Early Warning System (FEWS) in Guatemala

Year: 2016

Project(s): P42

Outcome Statement: One important part of the FEWS that is being constructed in Guatemala is the situation room in the municipalities. Experts from different institutions gather relevant information on food security and agroclimatic conditions, analyze it, make recommendations and then disseminate the information to relevant users. Digital support for this process was needed. SESAN adopted an online-based prototype of the situation room and a information product, both co-designed by Bioversity, SESAN and partners, for full implementation in the course of 2017.

Research Outputs: 1) Prototype of the information system including - an excel sheet with improved indicators and a weighing if the indicators used that will be used in the situation room to document the information from different sources and will lead the decision making in the council - a web-based, open-source tool with the reporting formats that the different institutions integrating the situation room use to structure and report their information - an improved information product, designed based on the results of a participatory process, that will be used to spread the information among next-users 2) Workshop report (unpublished) outlining the methodology for eliciting users preferences about design and layout as well as the experimental setting for understanding which indicators are important at what stage of a food security emergency for improved decision making

Research Partners: Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) helped with the research by organizing field work, workshops, providing contacts to relevant experts and key stakeholder and providing expert opinion. CATIE was also engaged in the elaboration of the research outputs.

Activities: We conducted a data quality analysis of the data produced by sentinel site communities, contrasting it to historical data from other sources. We had several meetings with higher-level delegates from SESAN to understand the needs of the institution in terms of the improvement of the FEWS. We had two participatory workshops with in total 39 delegates from SESAN at the central and municipal level that gave the necessary inputs for designing the prototype. We developed and executed a structured online survey with 33 respondents that gave us information on information preferences in different food security scenarios (part of a student's thesis project). We are conducting an evaluation of the prototype with key users (March 2017) and we will also conduct a training for 13 higher level delegates in the implementation and the use of the prototype (March 2017)

Non-Research Partneres: NGO Acción contra el Hambre (Action contre le Faim ACF, Spain) is a valuable partner in the field with a broad network of contacts in SESAN and the FEWS community in Guatemala. ACF helped with logistics, organizational issues and expert input.

Output Users: Direct users of the prototype are the members of the situation room, integrated by different stakeholder from a variety of institutions (Municipality, SESAN, Health Ministry, MAGA, etc.). A broader group of users is reached by the information products that are disseminated by situation rooms (extension agents, professionals from different institutions).

Evidence Outcome: SESAN published a news release confirming the validation of the prototype (see first reference below). SESAN has a strong need for the situation rooms, as they are among its priorities in plans confirmed by the current administration (second press release). SESAN is therefore very engaged in their development and implementation.

Output Used: In the food security situation room, the different stakeholders use our (prototype) product to filter and evaluate information that comes from different sources. Other users receive the enhanced information products to take informed professional decisions in accordance with the food security situation/outlook.

References Case: Press release "Validan proceso de implementación de salas situacionales municipales de SAN" ("Process of implementation of food security situation rooms validated")
<http://www.sesan.gob.gt/index.php/noticias/region-central/item/2012-validan-proceso-de-implementacion-de-salas-situacionales-municipales-de-san> Press release "Se implementan salas situacionales en SAN como metodo de gobernanza" ("Situation rooms are implemented as governance method")
<http://www.sesan.gob.gt/index.php/noticias/region-central/item/1948-se-implementaran-salas-situacionales-en-san-como-metodo-de-gobernanza>

Primary 2019 outcome indicator(s):

- Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities
- Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

Link between outcome story and the FP Outcome(s): <Not Defined>

Annex uploaded:

https://marlo.cgiar.org/data/ccafs/projects//42/caseStudy/InfoProduct_SituationRoom_Prototype.pdf

Case Study #132

Title: Costa Rica adopts digital system for emergency response data collection and decision-making

Year: 2016

Project(s): P42

Outcome Statement: In Costa Rica, the Ministry of Agriculture and Livestock (MAG) is responsible for agricultural emergency response including extreme climatic events (floods, droughts, hurricane). Until now, MAG has been slow in responding to emergencies, due to paper-based data collection leading to rushed decision-making based on partly-processed data. In 2016, MAG adopted a data collection+analysis system co-developed by Bioversity and MAG to document 57.6 m US\$ damage of Hurricane Otto. The new system reduced response time and allowed more in-depth data analysis.

Research Outputs: - Digital data collection system co-developed by Bioversity and MAG - Report on pilot implementation of the system in Siquirres in 2016 - Survey dataset of 3575 households affected by Hurricane Otto - Data analysis on the impact of Hurricane Otto done by Bioversity responding to inquiries from MAG

Research Partners: A PhD student of the University of Costa Rica (associated with Bioversity International) contributed to conceiving the research and coordinating activities. This student is agricultural extension agent of the Ministry of Agriculture and Livestock (on leave).

Activities: - Engagement with the Ministry of Agriculture throughout 2015, showcasing our work under Agroclimas in Guatemala and its possible relevance for Costa Rica - Pilot implementation of the data collection system together with the agricultural extension service in Siquirres responding to the floods of late 2015 in February 2016 (This effort built mutual trust and validated the system, creating the confidence that led to the quick series of decisions when Hurricane Otto hit) - Meeting with the minister of agriculture in the wake of Hurricane Otto - Capacity building throughout Costa Rica of approx. 300 extension agents in the use of the data collection system in December 2016 - Follow-up and guidance of data collection activities - Analysis of household data, documenting an estimated 57,600,000 US\$ in agricultural damage of Hurricane Otto - Presentation to the National Agricultural Council of the final report

Non-Research Partneres: Our main non-research partners were the agricultural extension agents of the public system

Output Users: National Agricultural Council (CAN) uses the data to create a detailed response plan, involving multi-million US\$ decision-making (the exact amount still needs to be confirmed). National Emergency Commission of Costa Rica (CNE) uses the data to decide about the total budget allocated to agricultural aspects of the emergency.

Evidence Outcome: Attached: - Report on 2016 pilot - Letter from minister of agriculture of Costa Rica requesting Bioversity support in data collection on Hurricane Otto - Presentation to National Agricultural Council (CAN) - Letter of director of agricultural extension thanking Bioversity: https://cgiar.sharepoint.com/sites/CCAFS/_layouts/15/guestaccess.aspx?docid=0546bef5cfc174c029ea9f0e00df86544&authkey=AakJ4grum80Q0FgF3xG6rIc Online: government press release and magazine article (see references)

Output Used: The activities responded to Hurricane Otto, which hit Costa Rica in late November 2016. Given the successful pilot in February 2016, Bioversity was requested to support data collection. The output was used allocate a multi-million budget to emergency response addressing agricultural losses and to build a detailed response plan.

References Case: Press release of Presidency of Costa Rica mentioning Bioversity support <http://presidencia.go.cr/comunicados/2017/01/sector-agropecuario-afina-plan-de-inversion-para-recuperar-produccion-agropecuaria-afectada-por-huracan-otto/> Article in widely respected agricultural magazine, mentioning Bioversity <http://revistaproagro.com/perdidas-millonarias-en-sector-agropecuario-costarricense-por-huracan-otto/> The outcome is too fresh to have any scientific publications yet. Nevertheless, we have submitted an article to the ISI journal Disasters (which is now undergoing major revisions) describing a pilot in Guatemala that was an antecedent to the pilot in Costa Rica in 2016. In both the Guatemalan and Costa Rican cases, it is clear that pilots / simulations of emergencies form a crucial tool to build institutional relationships, trust and mutual understanding before an emergency as these cannot be built during an emergency.

Primary 2019 outcome indicator(s):

- Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities

Link between outcome story and the FP Outcome(s): The investment in the data collection system is an important step towards climate services for agriculture and food security decision-making by the Costa Rican government. A next step in this effort is to use these data for prevention decision-making, which is of interest to the ministry and national emergency commission.

Annex uploaded:

<https://marlo.cgiar.org/data/ccafs/projects//42/caseStudy/P42-O132%20HurricaneOttoDocumentation.pdf>

Case Study #136

Title: Colombian agricultural sector adapts to climate variability with CIAT-CCAFS facilitated data collection, dissemination and science

Year: 2016

Project(s): P42

Outcome Statement: CIAT-CCAFS agroclimatic prediction science has changed how agricultural sector organizations (e.g. farmer associations: Fedearroz, Fenalce; NARS: Corpoica; private research organizations: Cenicafé), generate and share climate variability adaptation recommendations. Through Technical Agroclimatic Committees (MTA), organizations from different agricultural sectors discuss, share, and integrate knowledge to tackle climate variability in MTA regions (Santander (new 2016), Cordoba, Sucre, Cauca, Magdalena, Eje Cafetero). National and Regional Agroclimatic Bulletins are produced using information generated in the MTAs. The bulletins democratized climate information in the country.

Research Outputs: CIAT-CCAFS developed underpinning science that enabled the widespread and sustained use of site-specific agro-climatic forecasts. Delerce et al. (2016) demonstrated that 30–50% of the rice yield variability can be explained by 3–4 climatic factors that can be managed with site-specific recommendations. Similarly, Esquivel et al. (in prep.) (also see <https://goo.gl/d8weKg> and <https://goo.gl/2KCPXo>) have demonstrated that forecast skill in Colombia is good enough to produce recommendations for various rice and maize regions. The effort included calibration and validation of rice, maize and bean models for Colombian conditions (Barrios, 2016). These findings and tools were co-developed with national stakeholders. CIAT-CCAFS scientists assessed information needs in Santander, Cordoba, Tolima, Valle del Cauca, and Meta (<https://cgspace.cgiar.org/rest/bitstreams/73612/retrieve>), which has been key for delivering user-tailored services and identifying and inviting MTA participants. For bean producers, agronomic practice manuals were produced based on CIAT-CCAFS science to accompany forecasts (<https://cgspace.cgiar.org/handle/10568/76299> and <https://cgspace.cgiar.org/handle/10568/76613>).

Research Partners: La Corporación Colombiana de Investigación Agropecuaria (Corpoica) IRI – Columbia University Centro de Investigación de la Caña de Azúcar (Cenicaña) Centro de Investigación de Café (Cenicafé)

Activities: CIAT-CCAFS drove the establishment of 6 Technical Agroclimatic Roundtables (MTA, Mesas Técnicas Agroclimáticas), including the most recent one in Santander. There is also a National-level MTA. Through the MTAs, local and national governments, farmers' associations (Fenalce, Fedearroz, FNC, Cenicaña) and other participating institutions (universities, Corpoica) have institutionalized CIAT-CCAFS climate information into their decision making. CIAT-CCAFS science and capacity building on crop modelling and seasonal climate prediction enabled national partners, notably Fedearroz and Fenalce, to analyze local conditions and produce and disseminate seasonal agro-climatic forecasts across maize and rice producing regions. MTA participants continue monthly meetings to share forecasts now produced by their own teams. For example, Fedearroz and Fenalce now have teams of 5 people producing, interpreting and delivering monthly forecasts. National and regional agroclimatic are issued on a regular basis. Further information can be found in Camacho (2016).

Non-Research Partneres: Federación Nacional de Cultivadores de Cereales y Leguminosas (Fenalce) Federación Nacional de Arroceros (FEDEARROZ) Federación Nacional de Cafeteros (FNC) Asociación de Bananeros del Magdalena (ASBAMA) Instituto de Hidrología, Meteorología y Estudios Ambientales (IDEAM) Ministerio de Agricultura de Colombia

Output Users: Next user –technicians and researcher’s farmer associations and gremios use agro-climatic prediction tools End users – Farmers of national federations and gremios. In long term, potentially more than 500 000 farmers.

Evidence Outcome: Validation report (uploaded): Outcome Harvesting Report: How Colombian Agriculture Producers in Various Sectors Benefit from National Agroclimatic Bulletins and Technical Agroclimatic Roundtables, By Kemly Camacho. 2016.

Output Used: Research outputs were used to build capacity in farmers’ organizations as well as in IDEAM. Regional MTAs operate sustainably to analyze the national bulletin and localized climate forecasts and agronomic recommendations. Within the MTAs, outputs from CIAT-CCAFS research are shared and relationships between regional actors (farmer associations/public/private institutions) are facilitated.

References Case: Camacho, K. 2016. Outcome Harvesting Report (uploaded) Barrios, C. 2016. MSc Thesis. Blundo, G. et al. 2016. <https://ccafs.cgiar.org/fr/node/52420#.WKhbBDKZNo4> Delerce, S. et al. 2016. PLoS One 11, e0161620. Esquivel, A. et al. in prep. Predictability of Colombian rainfall assessed by canonical correlation analysis. In preparation. CCAFS. 2015. <https://ccafs.cgiar.org/es/mesas-tecnicas-agroclimaticas#.WKXWAm8rJhE>

Primary 2019 outcome indicator(s):

- Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities
- Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)
- # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Link between outcome story and and the FP Outcome(s): The outcome is also jointly reported with CCAFS LAM (Ana Maria Loboguerrero)

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5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

F4 (before F2 - James): Decision support systems improved or developed for incorporation into national food security safety net programs

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F4 (before F2 - James): Evidence and knowledge products synthesizing national gaps and opportunities to guide regional and global investment in climate informed agricultural and food security decision-making

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F4 (before F2 - James): Weather related Insurance products are designed, tested, and brought to scale with implementing partners

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F4 (before F2 - James): New knowledge, capacity, and tools supporting the provision of equitable climate services for farmers are developed

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F4 (before F2 - James): New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Major Output groups - 2016

F4 (before F2 - James): Decision support systems improved or developed for incorporation into national food security safety net programs

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

indicators based on these insights in the National Information System on Food and Nutritional Security (SESAN) in Guatemala. SESAN has identified a new validated set of key indicators to monitor food security based on household food security analyses done by CCAFS scientists.

Brief summary of your actual 2016 contribution towards the selected MOG: SESAN validated a set of key indicators for FEWS based on our data quality and reliability research. Based on our research on preferences for indicators according to different food security scenarios SESAN validated a weighing system for key indicators in the situation room.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: We will work in an iterative, collaborative way with SESAN to improve the information system. This will ensure that efforts are directed at needs that arise in the construction process.

Summary of the gender and social inclusion dimension of the 2016 outputs: The evaluation of the key indicators included a gender lens to assure first the inclusion of "female" information and to consider different information preferences. We conducted a small study to understand the gender dimension of the decision making process in the sentinel site community group.

F4 (before F2 - James): Evidence and knowledge products synthesizing national gaps and opportunities to guide regional and global investment in climate informed agricultural and food security decision-making

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

specific agro-climatic indicators, allowing characterization of the incidence of normal or climatic events on crops and provide new knowledge to support the decision making when implementing adaptation strategies and agro-climatic risk management

Brief summary of your actual 2016 contribution towards the selected MOG: Validation of climate and agronomy models for local contexts has helped to respond to climate challenges in short term periods, as well as to the strengthening of local capacities to understand climate, its impacts and ways to manage them using the approach as a way to reduce agro-climatic risks.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output:

Continue and finish our work in gender roles, social differentiation, key nodes and mapping information flows. This information will be used as baseline to identify gaps and tailor agro-climatic information to the requirements and demands of farmers for their usability to 4500 maize farmers and 3000 bean farmers in Colombia.

Summary of the gender and social inclusion dimension of the 2016 outputs: To identify gender roles and social differentiation throughout the entire production chain (from cultivar selection, crop production, consumption), through Household-level surveys to 600 families with ODK, including questions of: agronomy, climate, markets, gender, food security in Colombia

F4 (before F2 - James): Weather related Insurance products are designed, tested, and brought to scale with implementing partners

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

processing is done of data from weather stations, satellite images and crop yields available from Honduras; calculating relevant indices linked to agricultural insurance (e.g. Total precipitation rate to ensure crop failure due to drought)

Brief summary of your actual 2016 contribution towards the selected MOG: - Project proposal: Applying seasonal climate forecasting and innovative insurance solutions to climate risk management in the agriculture sector in SE Asia. - Oral presentation on Workshop November 28 – December 2, 2016. Makati City, Philippines on Crop Insurance Strategies to Manage Climate Risks, Case study in Honduras and Nicaragua.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: NA

Summary of the gender and social inclusion dimension of the 2016 outputs: One of the requirements of farmers, found in the mapping of information is to receive information on What is agricultural insurance and how it works? The project carries out an activity to respond to this requirement and also to show the lessons learned in Honduras.

F4 (before F2 - James): New knowledge, capacity, and tools supporting the provision of equitable climate services for farmers are developed

Brief bullet points of your expected annual 2016 contribution towards the selected MOG:

Research challenge we are trying to address is user experience and influence on decision-making of information and information (re)design based on these insights. We have discovered that many info products are not used much.

Brief summary of your actual 2016 contribution towards the selected MOG: Extension services such as Fedearroz, Fenalce, already have within their teams a meteorologist and agronomists who through a continuous work with AgroClimas / Met services are running tools as RClimTool, DSSAT and CPT, to answer questions on planting, varieties, supplies, management, and technology assessment.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: NA

Summary of the gender and social inclusion dimension of the 2016 outputs: It was planned to carry out an activity to know how CDT, CRAFT, CADMT works, and added value these tools to the decision that currently follows our partners in LAM. We will continue to promote efforts with other Flagship 4- projects around testing the different tools and approaches.

F4 (before F2 - James): New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: The Flagship 2 portfolio Organize teleconferences with a well defined agenda, short presentations from the different projects ,b). Webinars could be suggested as soon as we have interesting things to share, c) Support each month for the national and six regional agroclimatic technical tables and newsletter.

Brief summary of your actual 2016 contribution towards the selected MOG: To strengthen contacts and cooperation with relevant national meteorological services and agricultural research institutes, working as teams with intermediaries between applied science and farmers traditional knowledge. Based on discussions and capacity building with local stakeholders, agreements on recommended adaptation measures are written in Local Agro-climatic Bulletins by the group members.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: NA

Summary of the gender and social inclusion dimension of the 2016 outputs: Improving information formats and delivery to decision-makers and farmers

Major Output groups - 2015

F4 (before F2 - James): Decision support systems improved or developed for incorporation into national food security safety net programs

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: In 2015 we will be working towards outcomes planned for subsequent years. Activities for 2015 that include a gender aspect are the analysis of household surveys to analyze intrahousehold allocation of food and resources in order to create insights to improve food security

Brief summary of your actual 2015 contribution towards the selected MOG: RHoMIS surveys detailed information about the gender control over income streams within the households and allows for gender disaggregated analysis of several of the indicators. For the sentinel site system in SESAN we designed a study to understand female participation in decision making processes in the sentinel site community committees.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: A gender-sensitive strategy will be used in different activities to discuss the functioning of the sentinel sites with community groups. We will be able to show how insights from the analysis of household data and the functioning of sentinel sites will have influence the design and use of new indicators

Summary of the gender and social inclusion dimension of the 2015 outputs: The RHoMIS working paper presents the gender equity indicator that helps to understand the gender dimension in income control.

F4 (before F2 - James): Evidence and knowledge products synthesizing national gaps and opportunities to guide regional and global investment in climate informed agricultural and food security decision-making

Brief bullet points of your expected annual 2015 contribution towards the selected MOG:

-Collaboration agreement signed between the Information and Communication Network of the Agricultural Sector - AGRONET, MADR and CCAFS Agroclimas to spread all results generated in the project to farmers -Framework agreement between Honduras's Ministry of Agriculture and Livestock and CIAT to generate a roadmap and joint work in Honduras

Brief summary of your actual 2015 contribution towards the selected MOG: The work in Honduras might be affected in 2016 by the uncertainty in budget cuts. Nevertheless, last year a framework agreement was signed between Honduras's Ministry of Agriculture and Livestock and CIAT and Agroclimas spreading all results generated in the project to 270,000 registered users in AGRONET.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output:

Work in identifying gender roles and social differentiation throughout the entire production chain of the involved crops, to tailor the required agro-climatic information and to validate usability. Complete mapping based on interviews and focus group discussions with farmers and conducting interviews with key stakeholders.

Summary of the gender and social inclusion dimension of the 2015 outputs: The key nodes and mapping information flows in Colombia will be used as baseline in 2016 to identify gaps and tailor agro-climatic information to the requirements and demands of farmers for their usability to 4500 maize farmers and 3000 bean farmers in Colombia

F4 (before F2 - James): Weather related Insurance products are designed, tested, and brought to scale with implementing partners

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: Will collect the information of risks associated with climate for crops of beans and maize, as a first approximation of insurance based on climatic indices.

Brief summary of your actual 2015 contribution towards the selected MOG: Characterization of Crop Environments (Bean and Maize) to support the adaptation to climate variability in Colombia, which will allow to select the better site with the best agro-environmental condition (include climate, soil and agronomic factors) in order to have the best plant performance.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: NA

Summary of the gender and social inclusion dimension of the 2015 outputs: NA

F4 (before F2 - James): New knowledge, capacity, and tools supporting the provision of equitable climate services for farmers are developed

Brief bullet points of your expected annual 2015 contribution towards the selected MOG:

Implementation of national and regional agro-climatic tables (MTA); are local platforms in which different actors have the opportunity to discuss what those portfolios most appropriate measures according to their conditions, priorities and needs from climatic (past, monitoring and forecast) and agronomic information (crop models) that are available.

Brief summary of your actual 2015 contribution towards the selected MOG: The deputy minister of agriculture in an interview in TV highlighted the importance and sustainability of national /local technical agroclimatic committees and agroclimatic newsletters and through them as farmers are informed every month and are preparing for e.g. the impacts of the El Nino phenomenon,

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output:

Collect information and design mapping networks in Colombia in order to understand current information (agro-climate and food security), demand and gaps. Identifying gender roles and social differentiation throughout the entire production chain

Summary of the gender and social inclusion dimension of the 2015 outputs: Continue our work in identifying gender roles and social differentiation throughout the entire production chain of the involved crops, to tailor the required agro-climatic information and to validate usability. Complete mapping based on interviews and focus group discussions with farmers (maize, bean) in Colombia.

F4 (before F2 - James): New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries

Brief bullet points of your expected annual 2015 contribution towards the selected MOG:

Improve transparency and performance of climate forecasts in Colombia and the transfer of information to agricultural terms, Support for the national and regional agroclimatic technical tables (4) each month. Training Workshop: Using computational and statistical tools to support decision-making in agriculture --- Honduras

Brief summary of your actual 2015 contribution towards the selected MOG: Monthly Agroclimatic Bulletins being produced with Ministry of Agriculture monthly being used by farmers organisations, trade federations and local government organisations providing extension to proactively manage climate risks generated by El Nino in 2015. The role of agroclimatic forecast, are discussed and validated at each table (national and local)

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output:

Create a community of practice in climate forecasts in the Andean region (COL, PE) and Central America (GT, HN)

Summary of the gender and social inclusion dimension of the 2015 outputs: The institutions know our work (through twitter, blogs, conferences, exchanges, newsletter). Brand positioning #agroclimas in twitter, e.g. the workshop on climate forecast.

Major Output groups - 2014

F4 (before F2 - James): Decision support systems improved or developed for incorporation into national food security safety net programs

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F4 (before F2 - James): Evidence and knowledge products synthesizing national gaps and opportunities to guide regional and global investment in climate informed agricultural and food security decision-making

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F4 (before F2 - James): Weather related Insurance products are designed, tested, and brought to scale with implementing partners

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F4 (before F2 - James): New knowledge, capacity, and tools supporting the provision of equitable climate services for farmers are developed

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F4 (before F2 - James): New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

5.2 Deliverables

D104 - Household analysis to determine improved indicators taking into account intrahousehold allocation of food

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues
- Collection of sex-disaggregated data

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/75249>

Open access: No

Open access restriction: Effective Date Restriction - embargoed periods (if so, what are these periods?)

Restricted embargoed date: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: The Rural Household Multi-Indicator Survey (RHoMIS) for rapid characterisation of households to inform climate smart agriculture interventions: Description and applications in East Africa and Central America

Description / Abstract: Achieving climate smart agriculture depends on understanding the links between farming and livelihood practices, other possible adaptation options, and the effects on farm performance, which is conceptualised by farmers as wider than yields. Reliable indicators of farm performance are needed in order to model these links, and to therefore be able to design interventions which meet the differing needs of specific user groups. However, the lack of standardization of performance indicators has led to a wide array of tools and ad-hoc indicators which limit our ability to compare across studies and to draw general conclusions on relationships and trade-offs whereby performance indicators are shaped by farm management and the wider social environmental context. RHoMIS is a household survey tool designed to rapidly characterise a series of standardised indicators across the spectrum of agricultural production and market integration, nutrition, food security, poverty and GHG emissions. The survey tool takes 40–60 min to administer per household using a digital implementation platform. This is linked to a set of automated analysis

procedures that enable immediate cross-site bench-marking and intrasite characterisation. We trialled the survey in two contrasting agro-ecosystems, in Lushoto district of Tanzania (n=150) and in the Trifinio border region of Guatemala, El Salvador and Honduras (n=285). The tool rapidly characterised variability between farming systems at landscape scales in both locations identifying key differences across the population of farm households that would be critical for targeting CSA interventions. Our results suggest that at both sites the climate smartness of different farm strategies is clearly determined by an interaction between the characteristics of the farm household and the farm strategy. In general strategies that enabled production intensification contributed more towards the goals of climate smart agriculture on smaller farms, whereas increased market orientation was more successful on larger farms. On small farms off-farm income needs to be in place before interventions can be promoted successfully, whereas on the larger farms a choice is made between investing labour in off-farm incomes, or investing that labour into the farm, resulting in a negative association between off-farm labour and intensification, market orientation and crop diversity on the larger farms, which is in complete opposition to the associations found for the smaller farms. The balance of indicators selected gave an adequate snap shot picture of the two sites, and allowed us to appraise the 'CSAness' of different existing farm strategies, within the context of other major development objectives.

Publication / Creation date: 2016-05-01

Language: English

Country: <Not Defined>

Keywords: Farm household Smallholder farming Multiple indicators Monitoring

Citation: Hammond, J., Fraval, S., van Etten, J., Suchini, J.G., Mercado, L., Pagella, T., Frelat, R., Lannerstad, M., Douxchamps, S., Teufel, N. and Valbuena, D., 2017. The Rural Household Multi-Indicator Survey (RHoMIS) for rapid characterisation of households to inform climate smart agriculture interventions: Description and applications in East Africa and Central America. *Agricultural Systems*, 151, pp.225-233.

Handle: <http://hdl.handle.net/10568/75249>

DOI: <http://dx.doi.org/10.1016/j.agsy.2016.05.003>

Creator / Authors:

- Hammond - James
- Fraval - Simon
- van Etten - Jacob
- Suchini - Jose Gabriel
- Mercado - Leida
- Pagella - Tim
- Frelat - Romain
- Lannerstad - Mats
- Douxchamps - Sabine
- Teufel - Nils
- Valbuena - Nils
- van Wijk - Mark T.
- Douxchamps, - Sabine
- Wijk, - Mark T. van

Publication Metadata

Volume: 151

Issue:

Pages: 225-233

Journal/Publisher name: Agricultural Systems

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: Yes

Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
ILRI - International Livestock Research Institute	Van Wijk, Mark <m.vanwijk@cgiar.org>	Responsible
BIOVERSITY - Bioversity International	van Etten, Jacob<j.vanetten@cgiar.org>	Other

D186 - Improved the transmission of agroclimatic information and monitoring/impact assessment

Main Information

Type: Training materials

Subtype: Guidebook/Handbook/Good Practice Note

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Monitoring/impact assessment of gender outcomes of research/innovations/interventions/policies

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/76299>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Manejo Agronómico de Frijol

Description / Abstract: Communicating agroclimatological information for farmers' agricultural decisions: The Agroclimas project is implementing with farmers, through conventional and non-conventional mechanisms, actions that support the adoption of better agricultural practices through access to information of greater certainty about possible variations of the local climate and through knowledge on conditions that can affect their crops; implementing a process of learning and change of practices in the field that helps to improve decision making. For example, Make available improved germplasm (bean) to farmers, and adaptive measures to ensure increased productivity through partnerships with extension agents and grower associations. A first workshop was held on practices of agronomic management of bean cultivation, solid bases and elements that influence yield (days to flowering, agronomic load, and precocity); indicators that a variety can perform well, and generate a change of attitude towards a new agronomic management, through practical guides according to the precipitation information and historical temperatures in each planting season. For each workshop a manual is designed and socialized for farmers' use.

Publication / Creation date: 2016-07-01

Language: es

Country: <Not Defined>

Keywords: PHASEOLUS VULGARIS,BEANS,CULTIVATION,SITE PREPARATION,HARVESTING,FERTILIZER

APPLICATION,FRIJOL,CULTIVO,PREPARACIÓN DEL SITIO,CONTROL DE ENFERMEDADES,COSECHA,APLICACIÓN DE ABONOS

Citation: Jara C; Giraldo D. 2016. Manejo agronómico de frijol. Cartilla 1. Centro Internacional de Agricultura Tropical (CIAT). Cali, Colombia. 8 p.

Handle: <http://hdl.handle.net/10568/76299>

DOI: <Not Defined>

Creator / Authors:

- Cambio climático Agricultura y Seguridad Alimentaria (CCAFS), -
- International Center for Tropical Agriculture, -

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Giraldo, Diana <d.giraldo@cgiar.org>	Responsible
BIOVERSITY - Bioversity International	van Etten, Jacob<j.vanetten@cgiar.org>	Other
ACF International - Action Contre la Faim	Gaytan, Ada<agaytan@ca.acfspain.org>	Other
FENALCE - Federación Nacional de Cultivadores de Cereales	Duarte, Carmen Julio<cduarte@fenalceregional.org>	Other
CATIE - Centro Agronómico Tropical de Investigación y Enseñanza	Imbach, Pablo<pimbach@catie.ac.cr>	Other

D141 - Mapping networks -Guatemala: Baseline, initial diagnosis flow of knowledge and information

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: Not Disseminated

License adopted: No

Deliverable Metadata

Disseminated title: Oferta y demanda de información para la gestión de las sequías en el Corredor Seco de Guatemala: ¿cuál es la percepción de los tomadores de decisiones?

Description / Abstract: Inventory of agroclimatic information and evaluation of the usability of the products. Draft version, study will be updated before April 2016

Publication / Creation date: 2017-02-17

Language: Spanish

Country: Guatemala

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Bouroncle - Claudia

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<https://marlo.cgiar.org/data/ccafs/projects//42/deliverableDataSharing/informe%20LMA%20diciembre%202015%20v2.pdf>

https://marlo.cgiar.org/data/ccafs/projects//42/deliverableDataSharing/Bouroncle%20et%20al_Information-Products-CA_Evaluation.pdf
https://marlo.cgiar.org/data/ccafs/projects//42/deliverableDataSharing/CBouroncle_EGiron_Productos AgroClim_GTM%2002DIC15.pdf
https://marlo.cgiar.org/data/ccafs/projects//42/deliverableDataSharing/LINEA%20DE%20BASE_SC_AC F.pdf

Partners contributing to this deliverable:

Institution	Partner	Type
BIOVERSITY - Bioversity International	van Etten, Jacob <j.vanetten@cgiar.org>	Responsible

D335 - Support for the national and regional agroclimatic technical tables

Main Information

Type: Outreach products

Subtype: Newsletter

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<https://ccaafs.cgiar.org/es/mesas-tecnicas-agroclimaticas#.WKNkc9UrLIV>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: National and Local technical agroclimatic committees in Colombia

Description / Abstract: During of 2016 the national technical agroclimatic committees was realized, generating the monthly bulletins, completing two years of this initiative led by CCFAS, the Ministry of Agriculture and the National Meteorological Service and 27 participating institutions. Based on discussions and capacity building with local stakeholders in relation to agroclimatic information considering context-specific conditions, agreements on recommended adaptation measures are written in Local Agro-climatic Bulletins by the group members; two local technical agroclimatic committee were held in Santander with 16 participating institutions and one in the Eje Cafetero with 18 participating institutions. Workshop : Speaker in Zamorano-Honduras workshop (18-21 July), support to collaboration agreement between Zamorano and CIAT to work with students in crop modelling and climate information.

Publication / Creation date: 2016-02-14

Language: Spanish

Country: Colombia

Keywords: Meteorological Service, Bulletins, Agroclimate Information, Government

Citation: - National technical agroclimatic committees: To listen, read and interact with the newsletter see <https://goo.gl/I7oIuh> - Local technical agroclimatic committees in Santander:

<https://goo.gl/1r7hGn> - Blogpost: First local technical agroclimatic committee in Santander

<https://goo.gl/W8FPsQ> - Press release: Departmental government installed the local technical agroclimatic committee to accompany farmers <https://goo.gl/7WPDZC>

Handle: <http://www.aclimatecolombia.org/boletin-agroclimatico/>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Giraldo, Diana <d.giraldo@cgiar.org>	Responsible
FENALCE - Federación Nacional de Cultivadores de Cereales	Duarte, Carmen Julio<cduarte@fenalceregional.org>	Other
IDEAM - Instituto de Hidrología, Meteorología y Estudios Ambientales de Colombia	Ruiz, Jose Franklyn <jruiz@ideam.gov.co>	Other
MADR - Ministerio de Agricultura y Desarrollo Rural	Ruiz, Alejandro<alejandro.ruiz@minagricultura.gov.co>	Other

D336 - Implementation of Colombia Maprooms and handling of the data library

Main Information

Type: Outreach products

Subtype: Website

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://maprooms.ciat.cgiar.org/maproom/index.html#tabs-3>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Agro-climatic observatory for Colombia under the Maproom platform

Description / Abstract: Agro-climatic observatory for Colombia, facilitates local actors' access to the information and provides feedback is needed to create a dynamic source of information addressing tailored needs. - Workshop March 7-18 2016: Strengthen cooperation with the national meteorological service in Colombia (IDEAM) through continuous work with pentadal, and monthly CHIRPS precipitation dataset evaluation. The CHIRPS data were included in the data library. - The spatial database of the working paper "Characterization of Crop Environments to support the adaptation to climate variability in Colombia" 2016. CCAFS Working Paper no. 184. will be included in the maproom. <http://hdl.handle.net/10568/77230> - During 3-16 August and November 3 to 17 at CIAT, the Data Library IRI team carried out a training and transfer in the implementation of maproom and handling of the data library in our server of maproom (prelim version <https://goo.gl/MgK584>). The program focused on the using of the expert mode, learning the Ingrid data analysis language to generate own analyzes, uploading data of Colombia, and generating rooms of maps of our interest.

Publication / Creation date: 2016-10-01

Language: Spanish

Country: Colombia

Keywords: Tailored, workshops, maps, diffusion

Citation: Agro-climatic observatory for Colombia (prelim version)

Handle: <http://hdl.handle.net/10568/77230>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

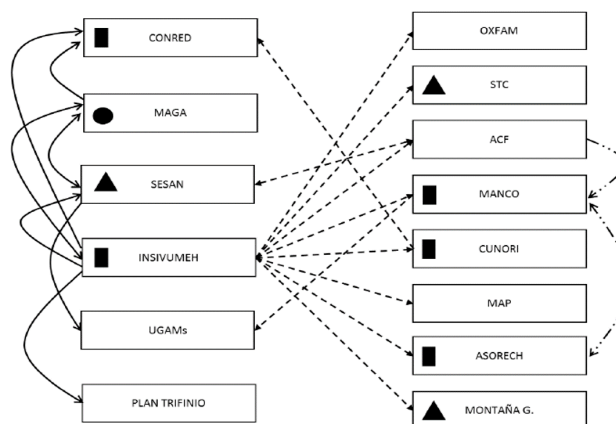
Partners contributing to this deliverable:

Institution	Partner	Type
Columbia University-United States	Baethgen, Walter <baethgen@iri.columbia.edu>	Responsible
IDEAM - Instituto de Hidrología, Meteorología y Estudios Ambientales de Colombia	Ruiz, Jose Franklyn <jruiz@ideam.gov.co>	Other
FENALCE - Federación Nacional de Cultivadores de Cereales	Duarte, Carmen Julio <cduarte@fenalceregional.org>	Other

5.3 Project Highlights

Project highlight 246

Title: M.Sc. thesis: Use and agro-climatic information needs at the local and departmental level in Chiquimula, Guatemala



Author: CATIE, Bioversity

Subject: MSc thesis. Agro-climatic information needs

Publisher: 2016

Year reported: 2016

Project highlights types:

- Participatory action research
- Successful communications
- Capacity enhancement

Is global: No

Start date: Feb 2015

End date: Nov 2016

Keywords: climate variability, drought, climate service, small holder farmers, agriculture

Countries: Guatemala

Highlight description: Currently, climate change effects are greatly impacting natural resources and the human population, increasing the threat of drought and other extreme weather conditions.

Introduction / Objectives: Due to reoccurring drought and irregular precipitation in the department of Chiquimula, located in the dry, eastern corridor of Guatemala, where there are families living in a state of poverty defined as infra subsistence and subsistence, agroclimatic information emerges as a resource for making decision on food security for organizations as well as small farmers. The present study analyzes the use and necessities of agroclimatic information in five municipalities in the department of Chiquimula, Guatemala. Qualitative methodology is used, more specifically semi structured interviews, to collect information from the organizations working in the agricultural sector and from small holder farmers.

Results: The results suggest that the climate information being generated is not useful, clear nor timely, and the communication channels are not adequate. Due to these issues, the farmers are not using the information to plan their at home activities. Therefore, the climatic information is not sufficient to help improve the decision making of the farmers. A climate service is needed that takes into account the necessities of the farmers, appropriate communication channels and clear language that is understood by the farmers for communicating the information. Encouraging the adoption of

climate services is important in order to strengthen the communities that are facing climate change effects. This research is looking for strategies for the development of complete climate services.

Partners: CATIE - Bioversity

Links / Sources for further information: Google drive:

<https://drive.google.com/file/d/0B1zGIFfuWfvBWGg5VG4xaWpUUfk/view?usp=sharing>

Project highlight 248

Title: M.Sc. thesis: Early Warning System and Action from an adaptive co-management approach: Case Study



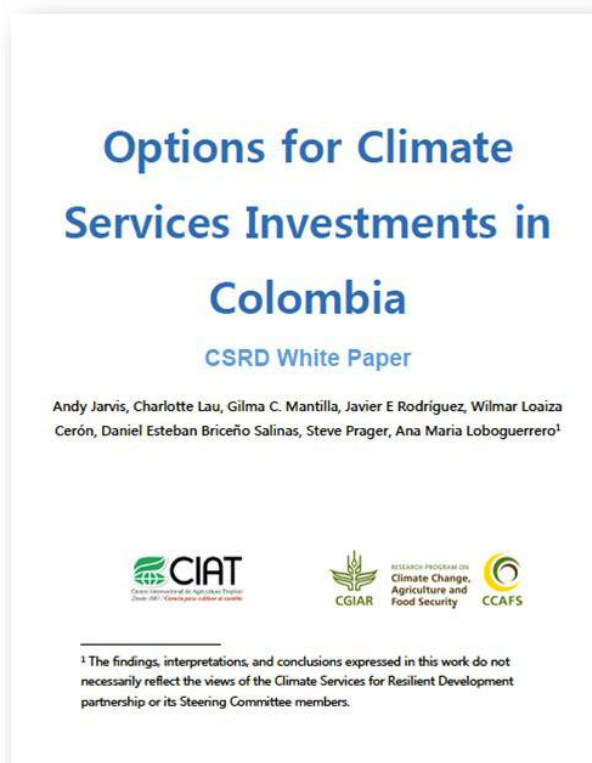
Author: CATIE, Bioversity	Subject: MSc thesis. Seasonal climate information
Publisher:	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Participatory action research • Successful communications • Capacity enhancement 	Is global: No
Start date: Jan 2015	End date: Dec 2016
Keywords:	Countries: Guatemala
Highlight description: This case study aims to extend the usability of SCI (seasonal climate information) for different types of users identified in the watershed Oquén, municipality of Jocotán, Guatemala.	
Introduction / Objectives: The methodology consisted of a user-centered design, through which it was generated and validated a SAAT (early warning, early action system). This process consisted of three stages: (1) data collection, (2) analyzing the information, and (3) development and validation of the solution. Focus groups, semi-structured interviews and workshops were used for the first stage. A SNA (Social network analysis) and an analysis of criteria, strategies and characteristics of the solution, using usability criteria and adaptive co-management criteria, were used for the second stage.	
Results: Finally, all the information was processed, including information obtained by direct observation, for the development of 3 SCIP (seasonal climate information products) and a Guide for use and communication, which together constitute the SAAT. The SAAT validation was performed using the SUS (System Usability Scale) resulting in a 73.3 score, considered acceptable in terms of usability. The work showed that the usability of the SCI available can be increased by using an approach of adaptive co-management, through a process of user-centered design	

Partners: <Not Defined>

Links / Sources for further information: Google Drive:
<https://drive.google.com/file/d/0B1zGIFfuWfvBUXd0ZUpkS3ZIYVU/view?usp=sharing>

Project highlight 249

Title: Climate Data and Information for Resilient Development in Colombia: USD 2,058,000 investment



Author: CIAT CCAFS USAID	Subject: Climate services for improved decision making in Colombia
Publisher: 2015	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Innovative non-research partnerships • Capacity enhancement • Inter-center collaboration • Policy engagement 	Is global: No
Start date: Aug 2015	End date: Aug 2018
Keywords:	Countries: Colombia
Highlight description: USAID investment in the development of climate services Colombia as one outcome of a national scale, participatory priority setting process that identified a preliminary climate service needs spanning many sectors and the scope of the AgroClimas project. Two core activities under this effort include (1) the improvement of agricultural climate forecast services and climate prediction models for rice and maize producing regions; and (2) the development of an automated agricultural climate forecasting interface to support streamlined access to information and improved decision-making related to rice and maize production. Once the information precision (i.e. forecast	

skill) has been assessed, the second part of this effort facilitates wide dissemination and broader use of the developed climate service. The goal is to create a web interface, available to the producers as well as the public at large, for interacting with the maprooms, and contextualized climate information designed to help improve agricultural decision making.

Introduction / Objectives: Specific activities include an analysis of seasonal precipitation forecast skill, working toward a comparison of statistical and dynamical climate models, and the implementation of locally tailored dynamic model forecasts. Results show that statistical forecast skill varies substantially per region and month, with inter-Andean valleys showing the highest predictability. Skill, however, varies depending on the period being predicted, with dry-wet season transition periods showing the lowest predictability. Mesoscale processes may be in part responsible for lack of forecast skill, since global dynamical models (of relatively low resolution) also show very limited skill in predicting local precipitation patterns.

Results: In order to assess farmers' information needs and requirements for the web interface, a series of workshops with farmers and local extension agents have been held. Findings from these workshops (2 out of 6 done to date) suggest that (1) the type of ICTs farmers have access to varies substantially across sites, and (2) it is challenging to develop a single silver-bullet format that addresses all users' needs. Nevertheless, the broad range of users in our workshops will help capturing site-specific user needs, which will ultimately enable the development of a highly site-tailored agro-climatic service. Other results: - Automation of the seasonal climate forecasting software CPT in R and training to 2 farmer organizations and the Colombian Meteorological Service (IDEAM) - Assessment of seasonal forecast skill across key maize, rice and bean producing regions reveals forecast skill is sufficient for use in seasonal prediction - New partnership between CIAT, IDEAM, and Fedearroz in Colombia will enhance current dynamical modelling capabilities and allow for better seasonal climate prediction

Partners: FENALCE, FEDEARROZ, IDEAM, MADR

Links / Sources for further information:

<https://www.usaid.gov/news-information/press-releases/usaid-announces-new-partnership-boost-climate-resilience-developing> <http://www.cs4rd.org/where.html>

6. Activities

A21 - Characterizing information flows, demand, gaps, decision-making cycles and measuring impact

Description: In this activity, we characterize current flows of knowledge and information and decision-making cycles in which climate and food security information is used or potentially used in government, non-governmental organizations, rural families. This characterization will serve to understand current information demand and gaps, define priorities and information requirements (contents, channels, formats, sophistication) and segregate different types of target users. Peer-reviewed articles: 1) Gender in climate variability adaptation, and 2) Agroclimatic information monitoring/impact

Start date: May 2015

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Blundo, Genowefa
<g.blundo@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: - Impact assessment methodology with farmers and key actors (institutions) Surveys: Household-level surveys to 600 families with ODK, including questions of: agronomy, climate, markets, gender, food security in Colombia. - Working paper 2016. Mapping Actors and Agroclimatic Information Needs in Maize and Bean Cultivation in Pilot Sites. CCAFS No. 88 <http://hdl.handle.net/10568/71110> - Info Note 2016: Local, reliable and timely agro-climatic information: a requirement of Colombian farmers. <http://hdl.handle.net/10568/72890> - StoryMap: fieldwork, surveys and focus groups (key actors and farmers) <http://goo.gl/wrIa4t> - 7 BlogPost, press release and CSP Newsletter

Deliverables in this activity:

- D431: A report of mapping networks -Colombia: Baseline for information flow and impact assessment, initial diagnosis
- D433: A report of mapping networks -Colombia: Monitoring information flows and impact measurement
- D368: Monitoring, evaluation and lesson learnt

A22 - Creating improved food security information system

Description: The overall aim of this activity is to help Guatemala fulfill its goal to build and maintain a national food security surveillance system. Research will involve household surveys and perform targeted new surveys to understand climate vulnerability and intra-household allocation of resources, in order to (i) make tracking of food security and climate risk affordable and reliable (ii) tailor climate information products to take into account local livelihood situations and make gender-sensitive targeting of information possible. To ensure uptake, this research will feed into the aspect of the activity that aims to make practical changes in how information is recorded and distributed in the current food security monitoring system. The activity will improve indicators, data collection, databases and data analysis to make the process more user-friendly and to help consolidate the monitoring system so that the information feeds into decision-making on food security in Guatemala.

Start date: Aug 2015

End date: Dec 2018

Activity leader: BIOVERSITY - Bioversity International Muller, Anna <anna.muller@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: - Active member of FEWS Stakeholder roundtable integrating NGOs and SESAN, that met once a month - regular meetings with high-level delegates of SESAN to assure that our research goes in line with SESANs information needs - workshop with 14 key stakeholder to evaluate key indicators (March 3, 2016) - data collection pilot with improved instrument in ODK with 20 SESAN delegates (May, 10-12, 2016) - 2 Workshops with total 39 participants for gathering data for the situation room prototype (November 10-11 and November 30, 2016) - survey with 33 key informants (November 2016) to understand food security and agroclimatic information preferences

Deliverables in this activity:

- D104: Household analysis to determine improved indicators taking into account intrahousehold allocation of food
- D366: New indicators and analysis on the basis of sentinel site data
- D367: New information products on the basis of sentinel and climate data
- D141: Mapping networks -Guatemala: Baseline, initial diagnosis flow of knowledge and information
- D143: Mapping networks - Guatemala: flow of knowledge and information for informing decision-making cycles

A23 - Develop Interface for analyzing climate/reconstruct series, interpolation of observed data and satellite estimates

Description: Case study (pilot site in Colombia with good crop, climate and soil data) to perform an effort to test the different tools for meteorological data (CDT, RCLimTool) and for connecting seasonal forecasts with crop models (AgroClimas/USAID, CADMT, CRAFT), trying to identify the opportunities, challenges in research topics and user at the level of decision making for each tool used that can be comparable.

Start date: May 2015

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Llanos, Lizeth

<L.Llanos@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: - Workshop March 7-18 2016: Strengthen cooperation with the national meteorological service in Colombia (IDEAM) through continuous work with CHIRPS precipitation dataset evaluation. - Workshop November 28 – December 2, 2016. Program for the Training of Trainers: Climate Information Service Provisioning. Makati City, Philippines. Training on Climate-Agriculture-Modeling and Decision Tool (CAMDT) - Gap-filling process, used a linear model in which the CHIRPS data is used as predictor of the weather station data at the daily scale, with R-square values between 0.55 and 0.84, indicating CHIRPS explains between 55 % and 84 % of the variance in the observed precipitation across sites. - Updated RCLimTool to include a forecast module: CCA using different combinations of the Empirical Orthogonal Functions, and then correlates the resulting canonical model back with the SST (at pixel level). The result is a map of average correlations indicating areas with the greatest influence on the regional precipitation.

Deliverables in this activity:

- D147: Design a web page with RCLimTool and document all the methodological development of this tool
- D148: Evaluate RCLimTool through case studies with local information of the countries involved in the project.
- D89: RCLimTool: A free application analyzing climate series, reconstruct series, and satellite estimates.
- D94: Methods to analysis of satellite images TRMM, CHIRPS and AgMERRA

A36 - Implementation of a regional observatory for improved climate risk management in the Colombian agricultural sector.

Description: Development of a website that will contain a set of agroclimatic information (usually maps). Combine climate information (e.g., temperatures, rainfall, Standardized Precipitation Index, WASP, assess existing/develop new drought indices), remotely sensed vegetation indices (NDVI, EVI, FAPAR), and soil water balances (based on climate information, land use and soil characteristics). The combination of this information will result in Early Warning and Early Response Systems.

Start date: Aug 2015

End date: Dec 2018

Activity leader: Columbia University-United States Baethgen, Walter <baethgen@iri.columbia.edu>

Status: On-going

Overall activity or progress made during this cycle: Agro-climatic observatory for Colombia, facilitates local actors' access to the information and provides feedback is needed to create a dynamic source of information addressing tailored needs. - The spatial database of the working paper "Characterization of Crop Environments to support the adaptation to climate variability in Colombia" 2016. CCAFS Working Paper no. 184. will be included in the maproom. <http://hdl.handle.net/10568/77230> - During 3-16 August and November 3 to 17 at CIAT, the Data Library IRI team carried out a training and transfer in the implementation of maproom and handling of the data library in our server of maproom (prelim version <https://goo.gl/MgK584>). The program focused on the using of the expert mode, learning the Ingrid data analysis language to generate own analyzes, uploading data of Colombia, and generating rooms of maps of our interest.

Deliverables in this activity:

- D772: Desing of the Observatory, water risks in the Colombian agricultural sector.
- D523: Data library and maprooms implementation: Observatory display to end users.
- D340: Agroclimatic zones (include characterization) in Colombian: maize-beans producing areas.
- D342: Methodology development to monitor current agroclimatic conditions.

A37 - Develop a methodology for integrating climate forecasts with the crop models and the local knowledge.

Description: Integrated, interdisciplinary crop performance forecasting systems, linked with appropriate decision and discussion support tools, could substantially improve operational decision making in agricultural management. Provide relevant information of the “future” through: Improve seasonal climate forecasts (next 3 months), increase spatial resolution (forecasts at station level, high-resolution grids), study predictability of agronomically relevant variables such as weather-within-climate (e.g., dry spells), SPI, drought indices, etc. Peer-reviewed article: 1) Predictability of seasonal precipitation over Colombia, and 2) Seasonal climate forecasts into agronomic outlooks.

Start date: Apr 2015

End date: Nov 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Giraldo, Diana
<d.giraldo@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: - Working Paper no. 168. 2016. Estado del arte de los productos de información climática en Colombia. CCAFS. <http://hdl.handle.net/10568/72433> - Oral presentation in Climate Change: Practical Solutions to Food Insecurity in Central America Workshop, 18 to 21 July 2016 in Zamorano campus – Honduras. Support to collaboration agreement between Zamorano and CCAFS to work with students in crop modelling and climate information for the inclusion academic curriculum - AgroClimas project, oral presentation in Ibero-American Regional Climate Services Workshop, 3 to 6 May, 2016 in Santiago de Chile. - Review of knowledge and seasonal forecasting initiatives in Colombia - Analysis of skill of seasonal climate forecasts with statistical models in -R (programming language): Selecting the predictor area, Multiple Factor Analysis (MFA) and Regression models. - Climate databases for prediction, climate indices and crop simulations - Site-and climate- specific agriculture recommendations across time-scales CIAT US\$ 500,000.00
Donor: USAID

Deliverables in this activity:

- D103: PICSA implementation- Participatory climate event simulation with farmers
- D333: Climate forecasts and the transfer of information to agricultural terms

A38 - Dissemination mechanisms for farmers: innovative “formats” of products.

Description: Participatory climate event simulation exercises will help to evaluate and refine the products and delivery mechanisms, engaging all stakeholders in a very practical way. Farmer's information network will provide the feedback needed to improved climate information packaging and confidence in forecasting skills. Also, our project includes exchanges among farming families of the region.

Start date: Aug 2015

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Giraldo, Diana
<d.giraldo@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: - Two MSc thesis, 1) Early Warning System and Action from an adaptive co-management approach: Case Study and 2) Use and agro-climatic information needs at the local and departmental level in Chiquimula, Guatemala. - Support for the national and regional agroclimatic technical tables - Workshops: with 300 bean farmers in four municipalities on Agronomic management and local climate (rainfall), and Pests and diseases, and local climate (temperature). Each workshop, will be given a booklet designed for farmers in each topic. - Seed: Bean seed multiplication selected by farmers in workshops. - Workshops for the identification of demands for the climate services for maize and rice. - Proposal to implement "Participatory Integrated Climate Services for Agriculture (PICSA): Field Manual" the next year

Deliverables in this activity:

- D186: Improved the transmission of agroclimatic information and monitoring/impact assessment
- D187: Services of SMS and agroclimatic newsletters to Farmers
- D335: Support for the national and regional agroclimatic technical tables
- D336: Implementation of Colombia Maprooms and handling of the data library

7. Leverages

No leverages added

Title: Mainstreaming CSA practices in mixed tree/food crop systems among smallholder farmers in W Africa & Latin America

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2018	RP LAM	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2, Bilateral	On-going	CIAT - Centro Internacional de Agricultura Tropical - Colombia	Lundy, Mark <m.lundy@cgiar.org>

Project is working on

Flaship(s)
F2 (before F1 - Andy): Climate-Smart Technologies and Practices

Region(s)
LAM: Latin America
WA: West Africa

Project summary

The project seeks to test methods for scaling Climate Smart Agricultural (CSA) practices through (a) voluntary certification schemes; and, (b) impact investments in producer organizations, using smallholder coffee and cocoa systems in Latin America as model cases. Project partners include two of the preeminent actors in voluntary certification (Rainforest Alliance) and impact investing (Root Capital). We will assess the climate change exposure of coffee and cocoa systems at a sub-national scale, develop appropriate CSA practices with farmers incorporating cash crops and food crops to increase the resilience of these systems and codify these practices in adaptation guidelines. These guidelines will be mainstreamed through existing certification training curricula and used to develop innovative investment products. Results will be promoted with multiple voluntary certification agencies and impact investors to achieve scale. Outcomes will influence government, private sector and civil society actors towards a common adaptation agenda applicable to other smallholder crops.

2. Partners

Partner #1 (Leader)

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Lundy, Mark <m.lundy@cgiar.org>	Project lead	HQ
Partner	Laderach, Peter <p.laderach@cgiar.org>	Activity 2014-15 *Leader*. Activity 2014-3 *Partner*.	HQ
Project Coordinator	Bunn, Christian <c.bunn@cgiar.org>	Activity 2014-15 *Leader*. Activity 2014-3 *Partner*.	HQ

Partner #2

Institution: IITA - International Institute of Tropical Agriculture

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Jassonge, Laurence <l.jassogne@cgiar.org>	Contribute to vulnerability assessments / zoning using crop and climate models for cocoa in Ghana; development of site specific CSA practices for cocoa training modules for West Africa; participation in multi-stakeholder platforms on cocoa in Ghana. Activity 2014-3 *Partner*. Activity 2014-15 *Partner*.	HQ

Partner #3

Institution: Root Capital-United States

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Schmerler, Benjamin <bschmerler@rootcapital.org>	Activity 2014-71 *Leader*.	HQ
Project Coordinator	Teague, Elizabeth <eteague@rootcapital.org>	Activity 2014-71 *Leader*.	HQ

Partner #4

Institution: SFL - Sustainable Food Lab

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Coordinator	Daniels, Stephanie <stephanie@sustainablefood.org>	Activity 2014-75 *Leader*.	HQ

Partner #5

Institution: Rainforest Alliance-United States

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Coordinator	Noponen, Martin <mnojonen@ra.org>	Activity 2014-3 *Leader*. Activity 2014-5 *Leader*.	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	A balance between research and development partners presents both opportunities and challenges. Opportunities include the re-combination of diverse types of knowledge, skills, practices, insights and relationships to solve complex problems. The challenges cluster around diverse expectations and needs as well as the necessity to balance research insights with field level development outcomes. The project strives to balance these distinct needs but could improve on this moving forward by making explicit the interests and incentives of all partners and identifying overlaps to drive action.

Partnerships overall over the last reporting period:

The project partnership continues to function well despite the difficulties inherent with uncertain funding regimes in the CGIAR. Some initial expectations evolved as information became available and iterative learning occurred. The CSA menu for cocoa in Ghana exemplifies this well. The project evolved from a 'laundry list' of specific practices to a much tighter focus on generic CSA practices with need for local adaptation explicitly identified. This required several rounds of negotiation between partners but functioned well.

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Country			Ghana
Country			Nicaragua
Country			Peru
Country			Côte d'Ivoire
Country			Honduras
Country			El Salvador
Country			Guatemala
Country			Uganda
Country			Rwanda
Country			United Republic of Tanzania

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:

Despite the vulnerability to climate change of millions of small coffee and cocoa producers, adaptation is not a prominent component of supply chains, certification schemes, extension programs and impact investing. This project will contribute to mainstreaming CSA practice in coffee and cocoa value chains by: (a) developing locally adapted guides for tree and food crops and incorporating these into training and technical assistance delivered to tens of thousands of farmers through certification networks; and, (b) contributing to the design of new impact investment mechanisms to support CSA uptake. Farmers will increase resilience through crop diversification and management adjustments depending on their specific exposure to climate change. These practices will be promoted by voluntary certification agencies and incorporated into financial investment vehicles by impact investors. These processes will be supported by MSPs with key private, public and civil society actors and lessons learned documented and promoted for other crops and regions.

Annual progress towards outcome (end of 2016*): Exposure gradient maps used by RA and RC in Ghana, Peru and Nicaragua. Specific CSA practices validated in Ghana, Peru and possibly Nicaragua. Training materials used by RA with 10 POs. Peer learning started with other certification agencies. Financial products used by Root Capital's with 10 POs. Peer learning started with other impact investment organizations through the CSAF. MSP meet once per year in Ghana, Peru and possibly Nicaragua. Key engagement with global partners under way through.

Annual progress towards project outcome in the current reporting cycle (2016*): Exposure maps completed for project geographies as planned. These maps were widely disseminated in 2016 through more than 15 high level engagements in diverse global forums. Significant expansion of geographic focus facilitated by bilateral USAID funding moving from 3 to 10 countries. Training materials with Rainforest Alliance under development but progress slower than expected on cost benefit analysis. This, in turn, led to delays in work by Root Capital on developing financial products. In 2017 Rainforest Alliance intends to incorporate lessons from the project into a new version of the Sustainable Agriculture Network certification scheme with the target of reaching 1.2 million farmers with the updated version this year. MSP functioning in Ghana and Peru to a modest extent. Due to funding cuts we scaled back support for open ended multi-stakeholder processes and focused on engagement through specific events. This seems to work well in Ghana and Peru. Significant advances in terms of key engagement with global partners. As part of the USAID bilateral project, we convened a private sector advisory council including ECOM AgroTrade, the Specialty Coffee Association of America, Starbucks, Nestlé, the Kellogg Company, Yara, Danone (Danone/Mars livelihoods Fund), Sime Darby, Technoserve, World Bank, World Cocoa Foundation and Hanns R. Neumann Foundation. In addition we interviewed more than 25 key global agrifood companies to identify drivers for CSA adoption as well as potential barriers. Final publication of these findings expected in 2017. These conversations influenced the activities of the project and led to new engagements with the World Business Council on Sustainable Development for climate resilient value chains in Ghana for cacao, maize and potentially other products. Finally the project

delivered 6 ISI publications, 27 presentations, 7 blog posts, 3 videos and supported the development of additional bilateral funding based on CCAFS research worth nearly 9 million dollars.

How communication and engagement activities have contributed to achieving your Project

outcomes:* Engagement is a critical component of this project. We focus on actors with the capacity to make changes at a systemic level. In 2016 we engaged with key coffee and cocoa companies both bilaterally and collectively through key note presentations at their premier global events, with key donors such as USAID and with peer agencies in the voluntary certification and impact investing sectors. In all cases we seek to leverage science to change minds, attitudes and practices in ways that the benefit the largest possible number of small producers in a sustained fashion.

Evidence documents of progress towards outcomes:* <Not Defined>

Annual progress towards outcome (end of 2015): Climate impact gradients for coffee, cocoa and associated food crops are developed for Ghana, Peru and Nicaragua. Specific CSA practices are identified, their cost-benefit assessed and participatory workshops held with producer associations to identify best fits for different conditions along the impact gradient initially in Ghana. Strategies are developed to incorporate best fits into Rainforest Alliance certification training materials. In a parallel fashion, Root Capital develops underwriting guidelines for CSA financial instruments. Multi-stakeholder platforms are convened in Ghana allowing dialogue around the role of public and private actors in cocoa adaptation and transition activities. Key global partners and events identified and an engagement strategy constructed. FOR REPORTING IN AUG 2015: In 2015, use of CCAFS climate science and site specific CSA practices (developed in LAM and Ghana) in the Rainforest Alliance voluntary certification scheme and in impact investment approaches implemented by Root Capital in 2015, with the aim of engaging 100,000 cacao farmers in Ghana in 2016).

Annual progress towards outcome (end of 2017): Results and methodologies of exposure gradient mapping for coffee, cocoa and food crops to identify specific CSA are actively being used by Rainforest Alliance and one additional voluntary certification agency and Root Capital and one additional impact investment agency in Peru, Nicaragua and Ghana. Site specific CSA practices further improved through at farmer field schools along exposure gradients in Peru, Nicaragua and Ghana. Training materials on climate-smart practices developed in local languages and being used in certification training and extension activities by at least two voluntary certification agencies and one commodity trader active in Peru, Nicaragua and Ghana reaching 20 producer associations. Emerging lessons learned shared with other voluntary certification agencies through the ISEAL Alliance. Climate smart adaptation and mitigation financial products scaled in Root Capital's and one additional impact investor's lending portfolio in Peru, Nicaragua and Ghana reaching 20 producer associations. Emerging lessons learned shared with other impact investment organizations through the Council on Smallholder Agricultural Finance and with national banking sectors in Peru, Nicaragua and Ghana. Multisector engagement facilitates discussions among key actors in three national level fora to promote climate adaptation in the target regions, review use of project findings and identify mechanisms to scale best bet CSA practices for the particular regions of focus at least once per year in Peru, Nicaragua and Ghana. Key engagement with global partners continues through meetings and presentations convened in or around relevant industry events in the coffee and cocoa sectors. At least one global brand company identified to promote use of project findings.

Annual progress towards outcome (end of 2018): Results and methodologies of exposure gradient mapping for coffee, cocoa and food crops to identify specific CSA are actively being used by Rainforest Alliance and two additional voluntary certification agency and Root Capital and two additional impact investment agency in Peru, Nicaragua and Ghana. Site specific CSA practices further improved through at farmer field schools along exposure gradients in Peru, Nicaragua and Ghana. Training materials on climate-smart practices developed in local languages and being used in certification training and extension activities by at least three voluntary certification agencies, one commodity trader and one government extension service in Peru, Nicaragua and Ghana reaching 35 producer associations. Emerging lessons learned taken up and incorporated by other voluntary certification agencies through the ISEAL Alliance. Climate smart adaptation and mitigation financial products scaled in Root Capital's and one additional impact investor's lending portfolio in Peru, Nicaragua and Ghana reaching 35 producer associations. Emerging lessons learned shared with other impact investment organizations through the Council on Smallholder Agricultural Finance and with national banking sectors in Peru, Nicaragua and Ghana. Multisector engagement facilitates discussions among key actors in three national level fora to promote climate adaptation in the target regions, review use of project findings and identify mechanisms to scale best bet CSA practices for the particular regions of focus at least once per year in Peru, Nicaragua and Ghana. Key engagement with global partners continues through meetings and presentations convened in or around relevant industry events in the coffee and cocoa sectors. At least one global brand company publicly commits to using project findings in a verifiable fashion and a second global brand company expresses interest in following suit.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* Our theory of change anticipated two impact pathways: (a) voluntary certification, and; (b) impact investing. Bilateral USAID funding allowed us to include a third focused on private sector engagement. To date these pathways remains valid. The project encountered difficulties in completing research needed to fully engage with these due to funding shortfalls and delayed delivery of outputs. As these outputs become available in 2017 we should be able to more fully test these pathways and critically re-assess their validity as vehicles for large-scale change.

4.2 CCAFS Outcomes

RP WA Outcome 2019: Public (MoAgr, MoLiv, MoEnv, MoRuD, MoPla, NARS) institutions and stakeholders, NGOs use CCAFS decision support tools to prioritize and design national level investments on CSA that will strengthen smallholder farmers adaptive capacity. Local decentralized Gov. services, NGOs and extension services partner to promote and scale up CSVs models using portfolios of CSA technologies and practices for local adaptation planning.

Indicator #2: # of public-private actors at national and sub-national levels are using new incentive mechanisms or business models/ markets that explicitly promote climate smart approaches along the value chain, using CCAFS science

2019
<p>Target value: 12</p> <p>Cumulative target to date: 72</p> <p>Target narrative: 2 voluntary standards organizations using methods and tools derived from this project to inform and tailor their extension programs in cocoa. In addition to Rainforest Alliance, likely users include Utz Certified and Fairtrade International. RA, Utz and FT currently certify 30% of global cocoa production; as leading members of the International Social and Environmental Accreditation and Labelling Alliance (ISEAL), they provide the central mechanism for farmers to gain recognition and value from improved farming practices. They are widely recognized as the mainstream programs in use by the cocoa trade in West Africa. 3 impact investment agencies using methods and tools derived from this project to inform their investment decisions in coffee and cocoa in Ghana. Potential users might include: Alterfin, Oikocredit, Rabobank's Rabo Rural Fund, responsAbility Investments AG, Root Capital, Shared Interest Society and Triodos Investment Management. These organizations currently lend approximately US\$ 400m annually to producer organizations but without explicit inclusion of climate science in their lending process. 1 National government extension service (Ghana / COCOBOD) using methods and tools derived from this project to inform and tailor their extension programs in cocoa. 2 cocoa commodity traders using methods and tools derived from this project to inform and tailor their extension programs in cocoa in Ghana. 4 producer associations using methods and tools derived from this project to inform and tailor their extension programs in cocoa in Ghana.</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2015

Target value: 3

Cumulative target to date: 3

Target narrative: 1 voluntary standard organization (Rainforest Alliance) using methods and tools derived from this project to inform and tailor their extension programs in cocoa in Ghana. 1 impact investment agency (Root Capital) using methods and tools derived from this project to inform their investment decisions in cocoa in Ghana. 1 producer association using methods and tools derived from this project to inform and tailor their extension programs in cocoa in Ghana.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 4

Cumulative target to date: 15

Target achieved: 4.0

Target narrative: 1 voluntary standard organization -- Rainforest Alliance -- using methods and tools derived from this project to inform and tailor their extension programs in cocoa in Ghana. 1 impact investment agency -- Root Capital -- using methods and tools derived from this project to inform their investment decisions in cocoa in Ghana. 1 National government extension service (Ghana / COCOBOD) using methods and tools derived from this project to inform and tailor their extension programs in cocoa. 1 producer associations using methods and tools derived from this project to inform and tailor their extension programs in cocoa in Ghana.

Narrative for your achieved targets, including evidence: Uptake by Rainforest of the evidence from the project used to update the Sustainable Agriculture Network (SAN) standard that underpins all crop specific certifications. In 2017 RA targets reaching 1.2 million farmers with the updated SAN. Slow finalization of CBA of CSA practices limited development of financial tools by Root Capital. Nonetheless exposure maps were combined with RC lending databases served to identify cocoa PO climate risk for the first time. New COCOBOD extension manual using project maps in draft form final expected in 2017. Use of project maps by REDD+ Forestry Commission initiatives..

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Gender disaggregated data on producers and producer organizations gathered.

The expected annual gender and social inclusion contribution to this CCAFS outcome: Gender disaggregated data on producers / PO gathered.

Major Output groups:

- F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)
- F2 (before F1 - Andy): Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)
- F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)
- F2 (before F1 - Andy): Evidence on equitable CSA certification schemes, new agri-business models, financial incentive mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain (LAM, WA, SA, SEA)

RP LAM Outcome 2019: LAM's producers associations are choosing and promoting CSA context-specific practices through strengthened extension services rescuing ancient and traditional knowledge. Local governments develop equitable local agricultural development plans using CSA context-specific portfolios assessed economically to plan and prioritize their investments focusing on climate variability challenges. NARS develop demand-driven outputs with sufficient technological capacity to address agricultural sector needs to face climate challenges. Private sector works with producer's associations, local and national governments to implement and scale out CSA involving agricultural market agents through innovative approaches (incentives along value chain to access to certification schemes). National governments scale up CSA approach based on successful experiences developed at local level.

Indicator #1: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019
<p>Target value: 6</p> <p>Cumulative target to date: 8</p> <p>Target narrative: 3 voluntary standards organizations using methods and tools derived from this project to inform and tailor their climate criteria and extension programs in coffee and cocoa. In addition to Rainforest Alliance, likely users include Utz Certified, Fairtrade International, 4C and Fairtrade USA. These organizations currently certify 30% of global cocoa production and 17% of global coffee production; as leading members of the International Social and Environmental Accreditation and Labelling Alliance (ISEAL), they provide the central mechanism for farmers to gain recognition and value from improved farming practices. They are widely recognized as the mainstream programs in use by the coffee and cocoa trade. 3 impact investment agencies using methods and tools derived from this project to inform their investment decisions in coffee and cocoa in Nicaragua and Peru. Potential users might include: Alterfin, Oikocredit, Rabobank's Rabo Rural Fund, responsAbility Investments AG, Root Capital, Shared Interest Society and Triodos Investment Management. These organizations currently lend approximately US\$ 400m annually to producer organizations but without explicit inclusion of climate science in their lending process.</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2015

Target value: 0

Cumulative target to date: 0

Target narrative: The project will be working towards this goal by engaging 1 voluntary certification organization and 1 impact investor around tools from this project for use in Ghana. The initial focus on Ghana is due to the need to report outcomes to DFID in Ghana by August 2015. For that reason LAM outcomes will become apparent in 2016.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 2

Cumulative target to date: 2

Target achieved: 3.0

Target narrative: 1 voluntary standards organizations using methods and tools derived from this project to inform and tailor their climate criteria and extension programs in coffee and cocoa (Rainforest Alliance). 1 impact investment agency using methods and tools derived from this project to inform their investment decisions in coffee and cocoa in Nicaragua and Peru (Root Capital).

Narrative for your achieved targets, including evidence: Uptake by Rainforest of the evidence and approach from the project used to update the Sustainable Agriculture Network (SAN) standard that underpins all of their crop specific certifications. In 2017 RA targets reaching 1.2 million farmers with the updated SAN. Slow finalization of Cost Benefit Analysis of CSA practices limited the development of financial tools by Root Capital. Nonetheless project exposure maps in combination with Root Capital lending databases served to identify producer organization climate risk in Peru for the first time. Use of results by the Cámara Peruana de Café y Cacao in its manual for climate smart coffee.

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Gender disaggregated data on producers and producer organizations gathered.

The expected annual gender and social inclusion contribution to this CCAFS outcome: Gender disaggregated data on producers / PO gathered

Indicator #2: # of public-private actors at national and sub-national levels are using new incentive mechanisms or business models/ markets that explicitly promote climate smart approaches along the value chain, using CCAFS science

2019

Target value: 45

Cumulative target to date: 72

Target narrative: 41 farmer associations using methods and tools derived from this project to inform and tailor their activities in coffee and cocoa in Nicaragua and Peru. 2 commodity traders using methods and tools derived from this project to inform their activities in Nicaragua and Peru for coffee and/or cocoa. 2 brand companies engaged in ongoing dialogue on providing incentives for farmers to adopt CSA.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2015

Target value: 0

Cumulative target to date: 3

Target narrative: The project will be working towards this goal through initial activities in Ghana. The initial focus on Ghana is due to the need to report outcomes to DFID in Ghana by August 2015. For that reason LAM outcomes will become apparent in 2016.

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

2016

Target value: 8

Cumulative target to date: 15

Target achieved: 4.0

Target narrative: 8 farmer associations using methods and tools derived from this project to inform and tailor their activities in coffee and cocoa in Nicaragua and Peru.

Narrative for your achieved targets, including evidence: Dialogue with four producer associations as well as individual producers to assess current issues with climate variability. The producer organizations initiated discussions on strategies to build more resilient coffee systems but more remains to be done.

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Gender disaggregated data on producers and producer organizations gathered.

The expected annual gender and social inclusion contribution to this CCAFS outcome: Gender disaggregated data on producers / PO gathered

Major Output groups:

- F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)
- F2 (before F1 - Andy): Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)
- F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)
- F2 (before F1 - Andy): Evidence on equitable CSA certification schemes, new agri-business models, financial incentive mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain (LAM, WA, SA, SEA)

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:

<Not Defined>

Collaborating with other CRPs

Policies, Institutions and Markets

Description of collaboration: Exploratory to date. Hope to finalized an agreement to examine how market mechanisms and value chain and business model upgrading can incorporate CSA practice promotion in ways that are profitable to farmers and buyers.

4.4 Case Studies

No case studies added

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

F2 (before F1 - Andy): Evidence on equitable CSA certification schemes, new agri-business models, financial incentive mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain (LAM, WA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Major Output groups - 2016

F2 (before F1 - Andy): Evidence on equitable CSA certification schemes, new agri-business models, financial incentive mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain (LAM, WA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: CSA practices incorporated into voluntary certification training materials by Rainforest Alliance CSA practices incorporated into impact investing vehicles by Root Capital

Brief summary of your actual 2016 contribution towards the selected MOG: CSA menus and cost benefit analysis behind schedule which limit uptake by Rainforest Alliance and Root Capital. Rainforest Alliance established a working group on climate smart agriculture with peer voluntary certification organizations under the ISEAL umbrella and Root Capital did the same in the Council on Smallholder Agricultural Finance.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: Gender disaggregated data on producers / PO gathered. All work focuses on smallholder farmers and thus drives social inclusion.

Summary of the gender and social inclusion dimension of the 2016 outputs: Data collection based on information available from project partners. Data quality remains spotty and needs improvement in 2017. Specific work on inter-generational land access in Ghana and gender aspects of cocoa in Nicaragua advanced.

F2 (before F1 - Andy): Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: CSA practices incorporated into voluntary certification training materials by Rainforest Alliance CSA practices incorporated into impact investing vehicles by Root Capital

Brief summary of your actual 2016 contribution towards the selected MOG: CSA menus and cost benefit analysis behind schedule which limit uptake by Rainforest Alliance and Root Capital. Rainforest Alliance established a working group on climate smart agriculture with peer voluntary certification organizations under the ISEAL umbrella and Root Capital did the same in the Council on Smallholder Agricultural Finance.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: Gender disaggregated data on producers / PO gathered. All work focuses on smallholder farmers and thus drives social inclusion.

Summary of the gender and social inclusion dimension of the 2016 outputs: Data collection based on information available from project partners. Data quality remains spotty and needs improvement in 2017. Specific work on inter-generational land access in Ghana and gender aspects of cocoa in Nicaragua advanced.

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: MSP established in Ghana, Peru and Nicaragua including public sector, producer organizations, civil society and private sector. Peer learning initiated with voluntary certification agencies (ISEAL) and impact investors (CSAF)

Brief summary of your actual 2016 contribution towards the selected MOG: MSP functioning in Ghana and Peru with multiple meetings. Nicaragua delayed to 2017 due to funding cuts. Initial peer learning activities started by Rainforest Alliance with ISEAL in the form of a climate change working group and initial conversations between Root Capital and peer agencies.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: Gender disaggregated data on producers / PO gathered. All work focuses on smallholder farmers and thus drives social inclusion. Not sure how gender is relevant at the level of multi-stakeholder platforms.

Summary of the gender and social inclusion dimension of the 2016 outputs: Data collection based on information available from project partners. Data quality remains spotty and needs improvement in 2017. Specific work on inter-generational land access in Ghana and gender aspects of cocoa in Nicaragua advanced.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: Exposure maps developed and used to identify appropriate CSA practices by risk gradient. CSA practices identified & prioritized by exposure gradient

Brief summary of your actual 2016 contribution towards the selected MOG: Exposure maps finalized for cocoa in Ghana and for coffee and cocoa in Peru. Exposure mapping expanded to Ivory Coast, Tanzania, Uganda, Rwanda, El Salvador, Honduras and Guatemala with bilateral support. CSA practices by exposure gradient for Ghana and Peru. Results to be extrapolated to Nicaragua and other countries.

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: Gender disaggregated data on producers / PO gathered. All work focuses on smallholder farmers and thus drives social inclusion.

Summary of the gender and social inclusion dimension of the 2016 outputs: Data collection based on information available from project partners. Data quality remains spotty and needs improvement in 2017. Specific work on inter-generational land access in Ghana and gender aspects of cocoa in Nicaragua advanced.

Major Output groups - 2015

F2 (before F1 - Andy): Evidence on equitable CSA certification schemes, new agri-business models, financial incentive mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain (LAM, WA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: Information provided to NGOs, public and private sector actors raised concerns about climate change and is helping to frame the conversation about what needs to be done.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: Forthcoming 2016

F2 (before F1 - Andy): Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: Scaling pathways identified in Ghana via public policy (e.g. Forestry Commission, REDD+) and private companies. Networks under development in Peru with producer and exporter organizations, NGOs and public sector for scaling.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: Forthcoming 2016 and 2017

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: Multi-stakeholder platforms established and initial conversations convened in Ghana (70+ people) and Peru (60+ people). Sub-national workshops on CSA practices held in Ghana to identify & prioritize CSA practices.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output:
<Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: Forthcoming 2016 and 2017

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: Methods under development for cost benefit analysis along the value chain

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output:
<Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: Forthcoming 2016 and 2017

Major Output groups - 2014

F2 (before F1 - Andy): Evidence on equitable CSA certification schemes, new agri-business models, financial incentive mechanisms and policy instruments to promote and mainstream CSA adoption at different levels of the value chain (LAM, WA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output:
<Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

5.2 Deliverables

D2277 - Turning local knowledge into an online decision-support tool for tree selection in smallholders' farms

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/78583>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Turning local knowledge on agroforestry into an online decision-support tool for tree selection in smallholders' farms

Description / Abstract: This paper presents the main features of a unique decision-support tool developed for selecting tree species in coffee and cocoa agroforestry systems. This tool aims at assisting in the selection of appropriate shade trees taking into account local conditions as well as needs and preferences of smallholder farmers while maximizing ecosystem services from plot to landscape level. This user-friendly and practical tool provides site-specific recommendations on tree species selection via simple graphical displays and is targeted towards extension services and stakeholders directly involved in sustainable agroforestry and adaptation to climate change. The tool is based on a simple protocol to collect local agroforestry knowledge through farmers' interviews and rankings of tree species with respect to locally perceived key ecosystem services. The data collected are first analysed using the BradleyTerry2 package in R, yielding the ranking scores that are used in the decision-support tool. Originally developed for coffee and cocoa systems of Uganda and Ghana, this tool can be extended to other producing regions of the world as well as to other cropping systems. The tool will be tested to see if repeated assessments show consistent ranking scores, and to see if the use of the tool by extension workers improves their shade tree advice to local farmers.

Publication / Creation date: 2017-01-01

Language: en

Country: GHANA,UGANDA

Keywords: AGROFORESTRY,COCOA,COFFEE,CROPPING SYSTEMS,LOCAL KNOWLEDGE,DECISION SUPPORT TOOLS,SMALLHOLDER FARMERS

Citation: Van Der Wolf, J., Jassogne, L., Gram, G. & Vaast, P. (2016). Turning local knowledge on agroforestry into an online decision-support tool for tree selection in smallholders' farms. *Experimental Agriculture*, 1-17.

Handle: <http://hdl.handle.net/10568/78583>

DOI: <http://dx.doi.org/10.1017/s001447971600017x>

Creator / Authors:

- Van Der Wolf - J
- Jassogne - L.
- Gram - G.
- Vaast - P.

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: *Experimental Agriculture*

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: No

Flagships contribution: • CCAFS - F2 (BEFORE F1 - ANDY)

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
IITA - International Institute of Tropical Agriculture	Jassogne, Laurence <l.jassogne@cgiar.org>	Responsible

D2725 - Climate change adaptation of coffee production in space and time

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/77563>

Open access: Yes

License adopted: Creative Commons Attribution 4.0 International License

Allow modifications: Yes

Deliverable Metadata

Disseminated title: Climate change adaptation of coffee production in space and time

Description / Abstract: Coffee is grown in more than 60 tropical countries on over 11 million ha by an estimated 25 million farmers, most of whom are smallholders. Several regional studies demonstrate the climate sensitivity of coffee (*Coffea arabica*) and the likely impact of climate change on coffee suitability, yield, increased pest and disease pressure and farmers' livelihoods. The objectives of this paper are (i) to quantify the impact of progressive climate change to grow coffee and to produce high quality coffee in Nicaragua and (ii) to develop an adaptation framework across time and space to guide adaptation planning. We used coffee location and cup quality data from Nicaragua in combination with the Maxent and CaNaSTA crop suitability models, the WorldClim historical data and the CMIP3 global circulation models to predict the likely impact of climate change on coffee suitability and quality. We distinguished four different impact scenarios: Very high (coffee disappears), high (large negative changes), medium (little negative changes) and increase (positive changes) in climate suitability. During the Nicaraguan coffee roundtable, most promising adaptation strategies were identified, which we then used to develop a two-dimensional adaptation framework for coffee in time and space. Our analysis indicates that incremental adaptation may occur over short-term horizons at lower altitudes, whereas the same areas may undergo transformative adaptation in the longer term. At higher elevations incremental adaptation may be needed in the long term. The same principle and framework is applicable across coffee growing regions around the world.

Publication / Creation date: 2016-10-26

Language: English

Country: Netherlands

Keywords: CLIMATE CHANGE, COFFEE, ADAPTATION, SIMULATION MODELS, CAFÉ, CAMBIO CLIMÁTICO, ADAPTACIÓN, MODELOS DE SIMULACIÓN

Citation: Läderach, Peter, Julian Ramirez-Villegas, Carlos Navarro-Racines, Carlos Zelaya, Armando Martinez-Valle, and Andy Jarvis. 2016. "Climate Change Adaptation of Coffee Production in Space and Time." *Climatic Change*, 1–16.

Handle: <http://hdl.handle.net/10568/77563>

DOI: 10.1007/s10584-016-1788-9

Creator / Authors:

- Läderach, - Peter
- Ramirez-Villegas, - Julian
- Navarro-Racines, - Carlos Eduardo
- Zelaya, - Carlos
- Martinez-Valle, - Armando
- Jarvis, - Andy

Publication Metadata

Volume:

Issue:

Pages: 1-16

Journal/Publisher name: *Climatic Change*, Springer Netherlands

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: Yes

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2278 - Soil fertility gradients and production constraints for coffee and banana on mountain slopes in Africa

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/76991>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Soil fertility gradients and production constraints for coffee and banana on volcanic mountain slopes in the east African rift: a case study of Mt. Elgon

Description / Abstract: Volcanic mountains in the East African Rift (e.g. Mt. Kenya, Mt. Kilimanjaro, Mt. Elgon) are some of the most productive agricultural regions, often dominated by coffee and banana cultivation. Consequently, these regions suffer from a high and increasing population density with a declining soil fertility status imposing pressure on the available land, which in turn results in encroaching into the national forests. This study documents the soil fertility constraints along the slopes of Mt. Elgon and explores its corresponding gradients in plant nutritional status. This research links the topography of Mt. Elgon to the prevailing soil types and their current fertility status. It reveals important relations and gradients between soil fertility parameters and its corresponding environment along the slope. Soil pH, soil available P and exchangeable K, Ca and Mg are significantly decreasing with elevation. Thereby, gradients and constraints in macro- and micro-nutrient uptake by coffee and banana are revealed along the toposequence and different altitude-specific nutrient limitations are determined for both crops. K, Mn and Si uptake in both crops is decreasing with elevation along the slope, while the Mo and Ni uptake in both crops is increasing. With increasing elevation, B uptake is only decreasing in coffee and P uptake is only decreasing in banana. In addition, the antagonistic interaction between K and Mg limits the Mg uptake of both crops in the lower areas, while in the high region the Mg uptake is simply limited by low soil availability. It follows that a general fertilizer recommendation cannot be made in these regions and that the soil fertility problems along these slopes should be specifically addressed and appropriately managed according to the local requirements.

Publication / Creation date: 2016-09-01

Language: en

Country: KENYA,UGANDA

Keywords: SOIL FERTILITY,COFFEA ARABICA,BANANA,NUTRIENT DEFICIENCIES

Citation: De Bauw, P., Van Asten, P., Jassogne, L. & Merckx, R. (2016). Soil fertility gradients and production constraints for coffee and banana on volcanic mountain slopes in the east African rift: a case study of Mt. Elgon. Agriculture, Ecosystems & Environment, 231, 166-175.

Handle: <http://hdl.handle.net/10568/76991>

DOI: <https://dx.doi.org/10.1016/j.agee.2016.06.036>

Creator / Authors:

- De Baue - P.
- Van Asten - P.
- Jassogne - L.
- Merckx - R.

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Agriculture, Ecosystems & Environment

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: No

Flagships contribution: • CCAFS - F2 (BEFORE F1 - ANDY)

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Partners contributing to this deliverable:

Institution	Partner	Type
IITA - International Institute of Tropical Agriculture	Jassogne, Laurence <l.jassogne@cgiar.org>	Responsible

D2279 - Towards collaborative research: Linking science to farmers' perceptions and knowledge on coffee pests and diseases

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/76547>

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Towards a collaborative research: a case study on linking science to farmers' perceptions and knowledge on Arabica coffee pests and diseases and its management

Description / Abstract: The scientific community has recognized the importance of integrating farmer's perceptions and knowledge (FPK) for the development of sustainable pest and disease management strategies. However, the knowledge gap between indigenous and scientific knowledge still contributes to misidentification of plant health constraints and poor adoption of management solutions. This is particularly the case in the context of smallholder farming in developing countries. In this paper, we present a case study on coffee production in Uganda, a sector depending mostly on smallholder farming facing a simultaneous and increasing number of socio-ecological pressures. The objectives of this study were (i) to examine and relate FPK on Arabica Coffee Pests and Diseases (CPaD) to altitude and the vegetation structure of the production systems; (ii) to contrast results with perceptions from experts and (iii) to compare results with field observations, in order to identify constraints for improving the information flow between scientists and farmers. Data were acquired by means of interviews and workshops. One hundred and fifty farmer households managing coffee either at sun exposure, under shade trees or inter-cropped with bananas and spread across an altitudinal gradient were selected. Field sampling of the two most important CPaD was conducted on a subset of 34 plots. The study revealed the following findings: (i) Perceptions on CPaD with respect to their distribution across altitudes and perceived impact are partially concordant among farmers, experts and field observations (ii) There are discrepancies among farmers and experts regarding management practices and the development of CPaD issues of the previous years. (iii) Field observations comparing CPaD in different altitudes and production systems indicate ambiguity of the role of shade trees. According to the locality-specific variability in CPaD pressure as well as in FPK, the importance of developing spatially variable and relevant CPaD control practices is proposed.

Publication / Creation date: 2016-08-01

Language: en

Country: <Not Defined>

Keywords: FARMS,PEST CONTROL,CLIMATE

CHANGE,FRUIT,INSECTICIDES,PESTICIDES,SCIENTISTS,EXPLORACIONES AGRARIAS,CONTROL DE PLAGAS,CAMBIO CLIMÁTICO,FRUTO,INSECTICIDAS,PLAGUICIDAS,CIENTÍFICOS

Citation: Liebig, Theresa; Jassogne, Laurence; Rahn, Eric; Läderach, Peter; Poehling, Hans-Michael; Kucel, Patrick; Van Asten, Piet; Avelino, Jacques. 2016. Towards a collaborative research: a case study on linking science to farmers' perceptions and knowledge on Arabica coffee pests and diseases and its management . PloS One 11(8):e0159392.

Handle: <http://hdl.handle.net/10568/76547>

DOI: <https://dx.doi.org/10.1371/journal.pone.0159392>

Creator / Authors:

- Liebig - Theresa
- Jassogne - L.
- Rahn - E.
- Läderach - P.
- Poehling - H.M.
- Kucel - P.
- Van Asten - P.
- Avelino - J.

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: PloS One

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: No

Flagships contribution: • CCAFS - F2 (BEFORE F1 - ANDY)

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
IITA - International Institute of Tropical Agriculture	Jassogne, Laurence <l.jassogne@cgiar.org>	Responsible

D2280 - Vulnerability to Climate Change of Cocoa in West Africa: Patterns, Opportunities and Limits to Adaptation

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/72587>

Open access: Yes

License adopted: Creative Commons Attribution 4.0 International License

Allow modifications: Yes

Deliverable Metadata

Disseminated title: From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa

Description / Abstract: The production of tropical agricultural commodities, such as cocoa (*Theobroma cacao*) and coffee (*Coffea* spp.), the countries and communities engaged in it, and the industries dependent on these commodities, are vulnerable to climate change. This is especially so where a large percentage of the global supply is grown in a single geographical region. Fortunately, there is often considerable spatial heterogeneity in the vulnerability to climate change within affected regions, implying that local production losses could be compensated through intensification and expansion of production elsewhere. However, this requires that site-level actions are integrated into a regional approach to climate change adaptation. We discuss here such a regional approach for cocoa in West Africa, where 70 % of global cocoa supply originates. On the basis of a statistical model of relative climatic suitability calibrated on West African cocoa farming areas and average climate projections for the 2030s and 2050s of, respectively, 15 and 19 Global Circulation Models, we divide the region into three adaptation zones: (i) a little affected zone permitting intensification and/or expansion of cocoa farming; (ii) a moderately affected zone requiring diversification and agronomic adjustments of farming practices; and (iii) a severely affected zone with need for progressive crop change. We argue that for tropical agricultural commodities, larger-scale adaptation planning that attempts to balance production trends across countries and regions could help reduce negative impacts of climate change on regional economies and global commodity supplies, despite the institutional challenges that this integration may pose.

Publication / Creation date: 2016-03-01

Language: en

Country: CAMEROON,SIERRA LEONE

Keywords: CLIMATE CHANGE,THEOBROMA CACAO,CROPPING SYSTEMS,DIVERSIFICATION,INTENSIFICATION,ARABICA COFFEE,CLIMATE CHANGE MITIGATION,CAMBIO CLIMÁTICO,TEMPERATURA,SISTEMAS DE CULTIVO,DIVERSIFICACIÓN,INTENSIFICACIÓN,CAFÉ ARÁBICA,MITIGACIÓN DEL CAMBIO CLIMÁTICO

Citation: Schroth, Götz; Läderach, Peter; Martinez-Valle, Armando Isaac; Bunn, Christian. 2016. From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa . Mitigation and Adaptation Strategies for Global Change 25 p.

Handle: <http://hdl.handle.net/10568/72587>

DOI: <https://dx.doi.org/10.1007/s11027-016-9707-y>

Creator / Authors:

- Schroth - G.
- Läderach - P.
- Martinez-Valle - A.
- Bunn - C.

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Mitigation and Adaptation Strategies for Global Change

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: No

Flagships contribution: • CCAFS - F2 (BEFORE F1 - ANDY)

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2281 - From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:
<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:
<http://hdl.handle.net/10568/72587>

Open access: Yes

License adopted: Creative Commons Attribution 4.0 International License

Allow modifications: Yes

Deliverable Metadata

Disseminated title: From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa

Description / Abstract: The production of tropical agricultural commodities, such as cocoa (*Theobroma cacao*) and coffee (*Coffea* spp.), the countries and communities engaged in it, and the industries dependent on these commodities, are vulnerable to climate change. This is especially so where a large percentage of the global supply is grown in a single geographical region. Fortunately, there is often considerable spatial heterogeneity in the vulnerability to climate change within affected regions, implying that local production losses could be compensated through intensification and expansion of production elsewhere. However, this requires that site-level actions are integrated into a regional approach to climate change adaptation. We discuss here such a regional approach for cocoa in West Africa, where 70 % of global cocoa supply originates. On the basis of a statistical model of relative climatic suitability calibrated on West African cocoa farming areas and average climate projections for the 2030s and 2050s of, respectively, 15 and 19 Global Circulation Models, we divide the region into three adaptation zones: (i) a little affected zone permitting intensification and/or expansion of cocoa farming; (ii) a moderately affected zone requiring diversification and agronomic adjustments of farming practices; and (iii) a severely affected zone with need for progressive crop change. We argue that for tropical agricultural commodities, larger-scale adaptation planning that attempts to balance production trends across countries and regions could help reduce negative impacts of climate change on regional economies and global commodity supplies, despite the institutional challenges that this integration may pose.

Publication / Creation date: 2016-03-11

Language: en

Country: CAMEROON,SIERRA LEONE

Keywords: CLIMATE CHANGE, THEOBROMA CACAO, CROPPING SYSTEMS, DIVERSIFICATION, INTENSIFICATION, ARABICA COFFEE, CLIMATE CHANGE MITIGATION, CAMBIO CLIMÁTICO, TEMPERATURA, SISTEMAS DE CULTIVO, DIVERSIFICACIÓN, INTENSIFICACIÓN, CAFÉ ARÁBICA, MITIGACIÓN DEL CAMBIO CLIMÁTICO

Citation: Schroth, Götz; Läderach, Peter; Martinez-Valle, Armando Isaac; Bunn, Christian. 2016. From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa . Mitigation and Adaptation Strategies for Global Change 25 p.

Handle: <http://hdl.handle.net/10568/72587>

DOI: <https://dx.doi.org/10.1007/s11027-016-9707-y>

Creator / Authors:

- Schroth - G.
- Läderach - P.
- Martinez-Valle - A.
- Bunn - C.

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Mitigation and Adaptation Strategies for Global Change

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: Yes

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible
IITA - International Institute of Tropical Agriculture	Jassonge, Laurence <l.jassogne@cgiar.org>	Other
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian<c.bunn@cgiar.org>	Other

D2282 - Replication Data: From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa

Main Information

Type: Data, models and tools

Subtype: Database/Dataset/Data documentation

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/76700>

Open access: Yes

License adopted: CC_LICENSES

Deliverable Metadata

Disseminated title: Replication Data for: From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa

Description / Abstract: We discuss here such a regional approach for cocoa in West Africa, where 70 % of global cocoa supply originates. On the basis of a statistical model of relative climatic suitability calibrated on West African cocoa farming areas and average climate projections for the 2030s and 2050s of, respectively, 15 and 19 Global Circulation Models, we divide the region into three adaptation zones: (i) a little affected zone permitting intensification and/or expansion of cocoa farming; (ii) a moderately affected zone requiring diversification and agronomic adjustments of farming practices; and (iii) a severely affected zone with need for progressive crop change. We argue that for tropical agricultural commodities, larger-scale adaptation planning that attempts to balance production trends across countries and regions could help reduce negative impacts of climate change on regional economies and global commodity supplies, despite the institutional challenges that this integration may pose

Publication / Creation date: 2016-08-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE ADAPTATION,ATMOSPHERIC SCIENCES,ENVIRONMENTAL MANAGEMENT

Citation: Schroth, Götz ; Läderach, Peter; Martinez-Valle, Armando; Bunn, Christian, 2016, "Replication Data for: From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa", doi:10.7910/DVN/1JMXC6, Harvard Dataverse, V1

Handle: <http://hdl.handle.net/10568/76700>

DOI: <https://dx.doi.org/10.7910/DVN/1JMXC6>

Creator / Authors:

- Schroth - G.
- Läderach - P.
- Martinez-Valle - A.
- Bunn - C.

Deliverable Quality check

FAIR Compliant: **F A I R**

Process of data quality assurance:

- Link: <http://link.springer.com/article/10.1007/s11027-016-9707-y>

Data dictionary:

- Link: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/5W7LGW>

Are the tools used for data collection available: • No

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian<c.bunn@cgiar.org>	Other
IITA - International Institute of Tropical Agriculture	Jassonge, Laurence <l.jassogne@cgiar.org>	Other

D2283 - Replication Data: Vulnerability to climate change of cocoa in West Africa

Main Information

Type: Data, models and tools

Subtype: Database/Dataset/Data documentation

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:
<http://hdl.handle.net/10568/76699>

Open access: Yes

License adopted: CC_LICENSES

Deliverable Metadata

Disseminated title: Replication Data for: Vulnerability to climate change of cocoa in West Africa: Patterns, opportunities and limits to adaptation

Description / Abstract: We use a combination of a statistical model of climatic suitability (Maxent) and the analysis of individual, potentially limiting climate variables. We find that: 1) contrary to expectation, maximum dry season temperatures are projected to become as or more limiting for cocoa as dry season water availability; 2) to reduce the vulnerability of cocoa to excessive dry season temperatures, the systematic use of adaptation strategies like shade trees in cocoa farms will be necessary, in reversal of the current trend of shade reduction; 3) there is a strong differentiation of climate vulnerability within the cocoa belt, with the most vulnerable areas near the forest-savanna transition in Nigeria and eastern Côte d'Ivoire, and the least vulnerable areas in the southern parts of Cameroon, Ghana, Côte d'Ivoire and Liberia; 4) this spatial differentiation of climate vulnerability may lead to future shifts in cocoa production within the region, with the opportunity of partially compensating losses and gains, but also the risk of local production expansion leading to new deforestation.

Publication / Creation date: 2016-08-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE ADAPTATION,CLIMATIC DATA,DEFORESTATION,DROUGHT STRESS,THEOBROMA CACAO

Citation: Schroth, Götz; Läderach, Peter; Martinez-Valle, Armando; Bunn, Christian; Jassogne, Laurence, 2016, "Replication Data for: Vulnerability to climate change of cocoa in West Africa: Patterns, opportunities and limits to adaptation", doi:10.7910/DVN/5W7LGW, Harvard Dataverse, V1

Handle: <http://hdl.handle.net/10568/76699>

DOI: <https://dx.doi.org/10.7910/DVN/5W7LGW>

Creator / Authors:

- Schroth, - Götz
- Läderach, - Peter
- Martinez-Valle, - Armando
- Bunn, - Christian<0000-0003-2175-8745>
- Jassogne, - Laurence

Deliverable Quality check

FAIR Compliant: **F A I R**

Process of data quality assurance:

- Link: <http://www.sciencedirect.com/science/article/pii/S0048969716304508>

Data dictionary:

- Link: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/5W7LGW>

Are the tools used for data collection available: • No

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible
IITA - International Institute of Tropical Agriculture	Jassogne, Laurence <l.jassogne@cgiar.org>	Other
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian<c.bunn@cgiar.org>	Other

D2731 - Impacto del cambio climático en las cadenas productivas del café: Gira de Aprendizaje a Colombia

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79878>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Impacto del cambio climático en las cadenas productivas del café: Presentación en Junta Nacional del café de Peru Gira de Aprendizaje a Colombia - Cali, Colombia

Description / Abstract: What is the projected impact of climate change on coffee value chains globally and in Central America. What can be done to improve the resilience of these production systems to the projected impact of climate change?

Publication / Creation date: 2017-02-01

Language: es

Country: <Not Defined>

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn C, Mark L. 2016. Impacto del cambio climático en las cadenas productivas del café: Presentación en Junta Nacional del café de Peru Gira de Aprendizaje a Colombia - Cali, Colombia. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79878>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark
- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2284 - Climate Smart Agriculture in the Coffee Sector

Main Information

Type: Outreach products

Subtype: Multimedia

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79800>

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Climate Smart Agriculture in the Global Coffee Sector

Description / Abstract: What are the risks that the coffee sector faces from climate change and what can be done to minimize those risks. Focus on telling a simple story for an industry audience.

Publication / Creation date: 2017-02-01

Language: en

Country: United States

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Lundy M. 2016. Climate Smart Agriculture in the Global Coffee Sector.

Handle: <http://hdl.handle.net/10568/79800>

DOI: <Not Defined>

Creator / Authors:

- Lundy - Mark<0000-0002-5241-3777>

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark <m.lundy@cgiar.org>	Responsible

D2732 - Impacto del cambio climático en las cadenas productivas del café: Mexico

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79885>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Impacto del cambio climático en las cadenas productivas del café: Presentación en Cumbre Latinoamericana del Cafe - Ciudad de Mexico

Description / Abstract: What is the projected impact of climate change on coffee value chains globally and in Central America. What can be done to improve the resilience of these production systems to the projected impact of climate change?

Publication / Creation date: 2017-02-01

Language: es

Country: Mexico

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn C, Mark L. 2016. Impacto del cambio climático en las cadenas productivas del café: Presentación en Cumbre Latinoamericana del Cafe - Ciudad de Mexico. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79885>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian
- Lundy, - Mark

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

CIAT-F2 (before F1 - Andy)-LAM-WA-P57 - Research Project

Submitted on 2017-02-17 at 18:21 (Reporting cycle 2016)



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2285 - Climate Change in the Supermarket

Main Information

Type: Outreach products

Subtype: Multimedia

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79801>

Open access: Yes

License adopted: CC_BY_NC_ND

Deliverable Metadata

Disseminated title: Klimawandel im Supermarkt (Climate change in the supermarket)

Description / Abstract: German TV documentary that shows CC impacts on popular food stuff.

Included a large segment on coffee in Colombia with CCAFS researcher Christian Bunn being interviewed and involved in the production. 1.3mio views on its main airing, 5 or more repeats on smaller channels and channel web site. Excerpts were used in different shows (morning show etc) and evening news.

Publication / Creation date: 2016-11-06

Language: de

Country: <Not Defined>

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Reufels B, Engels I. 2016. Klimawandel im Supermarkt (Climate change in the supermarket).

Handle: <http://hdl.handle.net/10568/79801>

DOI: <Not Defined>

Creator / Authors:

- Reufels, - Bernd
- Engels, - Ioanna

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
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CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible
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D2477 - Gendered perspectives of trees on farms in Nicaragua: Considerations for agroforestry, coffee and climate change

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Analysis of sex-disaggregated data
- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/78670>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gendered perspectives of trees on farms in Nicaragua: Considerations for agroforestry, coffee cultivation, and climate change

Description / Abstract: Due to gender-specific roles and responsibilities, men and women face varying challenges and opportunities to mitigate and adapt to climate change impacts. It is particularly important to take into account the ways that men and women engage with tree resources in order to develop both equitable and effective interventions and strategies, recognizing that agroforestry is an important element of these. For instance, agroforestry is often included among the recommended climate-smart agricultural practices for high value tree crops, like coffee. The paper analyzes household level socioeconomic data collected in 2015 within a Climate-Smart Village of the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) in Tuma La Dalia, Nicaragua, where smallholder shade coffee production is a substantial economic activity. The area is also part of a Landscape Observatory of the CGIAR Research Program in Forests, Trees and Agroforestry (FTA). The survey instrument developed is based on the Women's Empowerment in Agriculture Index (WEIA). From 271 households, a total of 493 surveys were carried out with adult men and women primary decision-makers. The intra-household survey collected data related to agricultural and agroforestry activities, and sex-disaggregated data on decision-making. The report provides initial insights into the uses and importance that women and men associate with trees on farms, as well as their participation in decision-making on agroforestry activities, in order to support the development

of gender-sensitive climate change interventions focused on high value tree crops. In particular, findings suggest that women associate a greater number of household uses with on-farm trees than men. Furthermore, women may be more prone to give importance to fruit trees in comparison to men. Results also demonstrate differences in women's and men's perceptions of decision-making processes concerning trees on farms: women recognize their participation more than men, particularly when it concerns fruit trees and planting, as opposed to tree management.

Publication / Creation date: 2017-01-01

Language: en

Country: NICARAGUA

Keywords: GENDER, GENERO, AGROFORESTRY, AGROFORESTERIA, CLIMATE CHANGE, CAMBIO CLIMÁTICO, NICARAGUA

Citation: Gumucio, Tatiana; Twyman, Jennifer; Clavijo, Monica. 2017. Gendered perspectives of trees on farms in Nicaragua: Considerations for agroforestry, coffee cultivation, and climate change. Working Paper. International Center for Tropical Agriculture (CIAT); CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS); CGIAR Research Program on Forests, Trees and Agroforestry (FTA). Cali, Colombia. 16 p. (CIAT Publication No.432)

Handle: <http://hdl.handle.net/10568/78670>

DOI: <Not Defined>

Creator / Authors:

- Gumucio, - Tatiana
- Twyman, - Jennifer
- Clavijo, - Monica

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2733 - Comunidad de aprendizaje para promover inversión privada en agricultura climaticamente adaptada

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79870>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Comunidad de aprendizaje para promover inversión privada en agricultura climaticamente adaptada: Presentación en Regional Forum Building resilience in coffee dependent communities - Managua, Nicaragua

Description / Abstract: Road map to incentivize private sector investment in climate resilience in coffee value chains.

Publication / Creation date: 2017-02-01

Language: es

Country: Nicaragua

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Mark L. 2016. Comunidad de aprendizaje para promover inversión privada en agricultura climaticamente adaptada: Presentación en Regional Forum Building resilience in coffee dependent communities - Managua, Nicaragua. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79870>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark <m.lundy@cgiar.org>	Responsible

D2286 - Climate change in coffee on German National TV news

Main Information

Type: Outreach products

Subtype: Multimedia

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:
<Not Defined>

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:
<http://hdl.handle.net/10568/79801>

Open access: Yes

License adopted: CC_BY

Deliverable Metadata

Disseminated title: Climate change in coffee on German National TV news

Description / Abstract: Climate change in coffee on German National TV news

Publication / Creation date: 2016-11-03

Language: German

Country: Germany

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Elsner C. 2016. ZDF heute-journal. 2016/11/03.

Handle: <http://hdl.handle.net/10568/79801>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2734 - The Future of Speciality Coffee: Adaptation through Climate Smart Agricultural Practices

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79879>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: The Future of Speciality Coffee: Adaptation through Climate Smart Agricultural Practices: Presentaation at SCAA Lecture Series - Atlanta, GA USA

Description / Abstract: Opening presentation on a panel discussion with Kuerig Green Mountain Coffee Roasters, Rainforest Alliance and Root Capital.

Publication / Creation date: 2017-02-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Bunn C. 2016. The Future of Speciality Coffee: Adaptation through Climate Smart Agricultural Practices: Presentaation at SCAA Lecture Series - Atlanta, GA USA. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79879>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura	Bunn, Christian	

Tropical	<c.bunn@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark<m.lundy@cgiar.org>	Other

D2735 - The Resilience of Coffee Dependent Communities: Challenge or Opportunity for Sustainability

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79880>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: The Resilience of Coffee Dependent Communities: Challenge or Opportunity for Sustainability: Presentation at SCAA Lecture Series - Atlanta, GA USA

Description / Abstract: Opening presentation on a panel discussion with Lutheran World Relief, SOPEXXA and the University of Vermont

Publication / Creation date: 2017-02-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Mark L. 2016. The Resilience of Coffee Dependent Communities: Challenge or Opportunity for Sustainability: Presentation at SCAA Lecture Series - Atlanta, GA USA. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79880>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
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CIAT-F2 (before F1 - Andy)-LAM-WA-P57 - Research Project

Submitted on 2017-02-17 at 18:21 (Reporting cycle 2016)



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark <m.lundy@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian<c.bunn@cgiar.org>	Other

D2736 - Unlocking Private Sector Investment in Climate Smart Agriculture: GLEE Zambia

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79886>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Unlocking Private Sector Investment in Climate Smart Agriculture: Presentation at USAID Global Learning and Exchange Event, Asia - Siem Reap, Cambodia

Description / Abstract: Exploration of how to incentivize private sector investment in climate smart agriculture and what role USAID can play in this process.

Publication / Creation date: 2017-02-01

Language: en

Country: Zambia

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Mark L. 2016. Unlocking Private Sector Investment in Climate Smart Agriculture: Presentation at USAID Global Learning and Exchange Event, Asia - Siem Reap, Cambodia. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79886>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura	Lundy, Mark	



Tropical	<m.lundy@cgiar.org>	Responsible
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D2737 - Unlocking Private Sector Investment in Climate Smart Agriculture: Cambodia

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79871>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Unlocking Private Sector Investment in Climate Smart Agriculture: Presentation at USAID Global Learning and Exchange Event, Asia - Lusaka, Zambia

Description / Abstract: Exploration of how to incentivize private sector investment in climate smart agriculture and what role USAID can play in this process.

Publication / Creation date: 2017-02-01

Language: en

Country: Cambodia

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Mark L. 2016. Unlocking Private Sector Investment in Climate Smart Agriculture: Presentation at USAID Global Learning and Exchange Event, Asia - Lusaka, Zambia. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79871>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura	Lundy, Mark	

Tropical	<m.lundy@cgiar.org>	Responsible

D2738 - Identification of learning sites: Presentation at CCAFS Stakeholder Workshop - Accra, Ghana

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79872>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Identification of learning sites: Presentation at CCAFS Stakeholder Workshop - Accra, Ghana

Description / Abstract: Presentation to introduce the concept of learning sites to spark stakeholder engagement for planned further activities: Evaluate and prioritize CSA practices, conduct cost-benefit analysis, placed strategically across impact zones.

Publication / Creation date: 2017-02-01

Language: en

Country: Ghana

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn C. 2016. Identification of learning sites: Presentation at CCAFS Stakeholder Workshop - Accra, Ghana. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79872>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2739 - Climate change impacts on cocoa in Ghana: Presentation at CCAFS Stakeholder Workshop - Accra, Ghana

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79881>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate change impacts on cocoa in Ghana: Presentation at CCAFS Stakeholder Workshop - Accra, Ghana

Description / Abstract: What is the projected impact of climate change on cocoa value chains in Ghana? What can be done to improve the resilience of these production systems to the projected impact of climate change?

Publication / Creation date: 2017-02-01

Language: en

Country: GHANA

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn C. 2016. Climate change impacts on cocoa in Ghana: Presentation at CCAFS Stakeholder Workshop - Accra, Ghana. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79881>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D1204 - National level forum - held in different project country

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2016

New expected year: 2017

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: Not Disseminated

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/INFORME%20DEL%20TALLER_CCAFS_NOV_2015.pdf

Partners contributing to this deliverable:

Institution	Partner	Type
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SFL - Sustainable Food Lab	Daniels, Stephanie <stephanie@sustainablefood.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark<m.lundy@cgiar.org>	Other

D2740 - Climate change impacts on cocoa in Ghana: Results of a Random Forest suitability classification study

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79802>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate change impacts on cocoa in Ghana: Results of a Random Forest suitability classification study

Description / Abstract: The presentation and discussion focused on providing updated climate change projections based on joint work by CIAT and CRIG incorporating climate datasets, current cocoa production sites and soil information.

Publication / Creation date: 2017-02-01

Language: en

Country: GHANA

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn, Christian; Lundy, Mark; Castro, Fabio. 2016. Climate change impacts on cocoa in Ghana: Results of a Random Forest suitability classification study. Presented at the kick-off workshop held in May 2015. International Center for Tropical Agriculture (CIAT).

Handle: <http://hdl.handle.net/10568/79802>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian
- Lundy, - Mark
- Castro, - Fabio

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D1205 - Global multi-stakeholder engagement

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2016

New expected year: 2017

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: Not Disseminated

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
SFL - Sustainable Food Lab	Daniels, Stephanie <stephanie@sustainablefood.org>	Responsible



D2741 - Climate-smart Cocoa: Adaptation Practices for Smallholder Systems in Ghana

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79803>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate-smart Cocoa: Adaptation Practices for Smallholder Systems in Ghana

Description / Abstract: The presentation focused on results from farmer consultations on adequate climate smart practices. This presentation first highlighted the elaborate approach that was used to identify, assess and validate long lists of specific CSA practices for each of the climatic impact zones. Desk study, expert interviews and farmer consultations were followed up with field assessments, a stakeholder workshop of several days at CRIG and finally field verification with reaching over a thousand farmers in the three impact zones.

Publication / Creation date: 2017-02-01

Language: en

Country: GHANA

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn, Christian; Lundy, Mark; Castro, Fabio. 2016. Climate-smart Cocoa: Adaptation Practices for Smallholder Systems in Ghana. Presented at the kick-off workshop held in May 2015. International Center for Tropical Agriculture (CIAT).

Handle: <http://hdl.handle.net/10568/79803>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian
- Lundy, - Mark
- Castro, - Fabio

Deliverable Quality check

FAIR Compliant: 

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2742 - Los impactos del cambio climático al cacao en Centroamérica: II Foro Centroamericano de cacao

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79877>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Los impactos del cambio climático al cacao en centro américa: Presentación en II Foro Centroamericano de cacao - San Pedro Sula

Description / Abstract: What is the projected impact of climate change on cocoa value chains globally and in Central America. What can be done to improve the resilience of these production systems to the projected impact of climate change?

Publication / Creation date: 2017-02-01

Language: es

Country: Honduras

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Zelaya C, Bunn C, Mark L. 2016. Los impactos del cambio climático al cacao en centro américa: Presentación en II Foro Centroamericano de cacao - San Pedro Sula, Honduras. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79877>

DOI: <Not Defined>

Creator / Authors:

- Zelaya, - Carlos
- Lundy, - Mark
- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2747 - Climate change adaptation of coffee production in space and time

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/77563>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate change adaptation of coffee production in space and time

Description / Abstract: Coffee is grown in more than 60 tropical countries on over 11 million ha by an estimated 25 million farmers, most of whom are smallholders. Several regional studies demonstrate the climate sensitivity of coffee (*Coffea arabica*) and the likely impact of climate change on coffee suitability, yield, increased pest and disease pressure and farmers' livelihoods. The objectives of this paper are (i) to quantify the impact of progressive climate change to grow coffee and to produce high quality coffee in Nicaragua and (ii) to develop an adaptation framework across time and space to guide adaptation planning. We used coffee location and cup quality data from Nicaragua in combination with the Maxent and CaNaSTA crop suitability models, the WorldClim historical data and the CMIP3 global circulation models to predict the likely impact of climate change on coffee suitability and quality. We distinguished four different impact scenarios: Very high (coffee disappears), high (large negative changes), medium (little negative changes) and increase (positive changes) in climate suitability. During the Nicaraguan coffee roundtable, most promising adaptation strategies were identified, which we then used to develop a two-dimensional adaptation framework for coffee in time and space. Our analysis indicates that incremental adaptation may occur over short-term horizons at lower altitudes, whereas the same areas may undergo transformative adaptation in the longer term. At higher elevations incremental adaptation may be needed in the long term. The same principle and framework is applicable across coffee growing regions around the world.

Publication / Creation date: 2016-11-01

Language: en

Country: NICARAGUA

Keywords: CLIMATE CHANGE, COFFEE, ADAPTATION, SIMULATION MODELS, CAFÉ, CAMBIO CLIMÁTICO, ADAPTACIÓN, MODELOS DE SIMULACIÓN

Citation: Läderach, Peter; Ramirez-Villegas, Julian; Navarro-Racines, Carlos; Zelaya, Carlos;

Martinez-Valle, Armando; Jarvis, Andy. 2016. Climate change adaptation of coffee production in space and time . Climate Change 1-16 p.

Handle: <http://hdl.handle.net/10568/77563>

DOI: <http://dx.doi.org/10.1007/s10584-016-1788-9>

Creator / Authors:

- Läderach, - Peter
- Ramirez-Villegas, - Julian
- Navarro-Racines, - Carlos Eduardo
- Zelaya, - Carlos
- Martinez-Valle, - Armando
- Jarvis, - Andy

Publication Metadata

Volume:

Issue:

Pages:

Journal/Publisher name: Climate Change

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: No

Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Laderach, Peter <p.laderach@cgiar.org>	Responsible

D2687 - Coffee and climate change: Effectively guiding forward looking climate change adaptation of global coffee chains

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/78747>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Coffee and climate change: effectively guiding forward looking climate change adaptation of global coffee supply chains

Description / Abstract: <Not Defined>

Publication / Creation date: 2017-01-01

Language: en

Country: China

Keywords: coffee, climate change, ASIC

Citation: Bunn, Christian; Läderach, Peter; Lundy, Mark; Montagnon, C; Mosnier, A. 2016. Coffee and climate change: effectively guiding forward looking climate change adaptation of global coffee supply chains. Presented at the 26th International Conference on Coffee Science. ASIC (the Association for Science and Information on Coffee). Kunming. November 13-19, 2016.

Handle: <http://hdl.handle.net/10568/78747>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian
- Läderach, - Peter
- Lundy, - Mark
- Montagnon, - C
- Mosnier, - A

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2691 - Impacto del cambio climático en las cadenas productivas del café

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79882>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Impacto del cambio climático en las cadenas productivas del café: Presentación en Regional Forum Building resilience in coffee dependent communities - Managua, Nicaragua

Description / Abstract: What is the projected impact of climate change on coffee value chains globally and in Central America. What can be done to improve the resilience of these production systems to the projected impact of climate change?

Publication / Creation date: 2017-02-01

Language: es

Country: NICARAGUA

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Lundy, M. 2016. Impacto del cambio climático en las cadenas productivas del café: Presentación en Regional Forum Building resilience in coffee dependent communities - Managua, Nicaragua. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79882>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark
- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark <m.lundy@cgiar.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian<c.bunn@cgiar.org>	Other

D2692 - Unlocking Private Sector Investment in Sustainable Agriculture

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79867>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Unlocking Private Sector Investment in Sustainable Agriculture: Presentation at ISEAL 2016 Global Sustainability Standards Symposium - Bogotá, Colombia

Description / Abstract: How can science incentivize private sector investments in more resilient production systems with smallholder farmers.

Publication / Creation date: 2017-02-01

Language: es

Country: <Not Defined>

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Lundy M, Bunn C. 2016. Unlocking Private Sector Investment in Sustainable Agriculture: Presentation at ISEAL 2016 Global Sustainability Standards Symposium - Bogotá, Colombia. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79867>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark
- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark <m.lundy@cgiar.org>	Responsible

D2693 - Climate Smart Agriculture in the Global Coffee Sector: Presentation at Re;Co Annual Symposium

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79874>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate Smart Agriculture in the Global Coffee Sector: Presentation at Re;Co Annual Symposium - Atlanta, GA USA

Description / Abstract: What are the risks that the coffee sector faces from climate change and what can be done to minimize those risks. Focus on telling a simple story for an industry audience.

Publication / Creation date: 2017-02-01

Language: es

Country: <Not Defined>

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Lundy M. 2016. Climate Smart Agriculture in the Global Coffee Sector: Presentation at Re;Co Annual Symposium - Atlanta, GA USA. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79874>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
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CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark <m.lundy@cgiar.org>	Responsible
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D198 - Engagement strategy for national level platforms

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

[https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/Invitation_CCAFS%20Mainstreaming%20Climate%20Smart%20Cocoa\(1\).pdf](https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/Invitation_CCAFS%20Mainstreaming%20Climate%20Smart%20Cocoa(1).pdf)

<https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/CIAT%20ExpoCafé%20final.pdf>

https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/CIAT_CPC_web.pptx

<https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/CSDS%20II%20Presentation%20at%20Mensvic.pptx>

<https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/Copy%20of%20list%20of%20i>

[nvitees%20-%20March%202016%20\(1\)%20\(1\).xlsx](#)

<https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/Mapping%20results.pptx>

Partners contributing to this deliverable:

Institution	Partner	Type
SFL - Sustainable Food Lab	Daniels, Stephanie <stephanie@sustainablefood.org>	Responsible

D2694 - Is our chocolate melting away?: Presentation at Agri-chains & Sustainable Development

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79883>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Is our chocolate melting away?: Presentation at Agri-chains & Sustainable Development - Montpellier, France

Description / Abstract: Using the latest climate impact modeling technology and through a collaborative partnership with WCF, CIAT will present update and refined maps of the potential zones of impact of climate change on cocoa. The presentation will explain how through the use of technology and in partnership with national regulators in Côte d'Ivoire and Ghana, CIAT has been able to update and ground-truth data elements to arrive at more precise and predictable set of outcomes for the impacts. The presentation will demonstrate how multi-stakeholder processes can yield powerful tools for policy makes, industry and farmers.

Publication / Creation date: 2017-02-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Bunn C, Castro F, Budiansky E, Lundy M. 2016. Is our chocolate melting away?: Presentation at Agri-chains & Sustainable Development - Montpellier, France. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79883>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian
- Castro, - Fabio
- Budiansky, - Ethan
- Lundy, - Mark

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2695 - Climate smart cocoa value chains: Journees Nationales du Cacao et du Chocolat - Ivory Coast

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79868>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate smart cocoa value chains: Presentation at Journees Nationales du Cacao et du Chocolat - Abidjan, Ivory Coast

Description / Abstract: What is the projected impact of climate change on cocoa value chains in Ivory Coast What can be done to improve the resilience of these production systems to the projected impact of climate change?

Publication / Creation date: 2017-02-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Bunn C, Mark L, Castro F. 2016. Climate smart cocoa value chains: Presentation at Journees Nationales du Cacao et du Chocolat - Abidjan, Ivory Coast. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79868>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian
- Lundy, - Mark
- Castro, - Fabio

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D200 - Global multi-stakeholder engagement

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: Not Disseminated

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/CSA%20Overview%20for%20Advisory%20Council%20v3.pdf>

Partners contributing to this deliverable:

Institution	Partner	Type
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SFL - Sustainable Food Lab	Daniels, Stephanie <stephanie@sustainablefood.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark<m.lundy@cgiar.org>	Other

D2696 - Climate smart cocoa value chains: Presentation at 3rd World Cocoa Conference - Bavaro, Dominican Republic

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79873>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate smart cocoa value chains: Presentation at 3rd World Cocoa Conference - Bavaro, Dominican Republic

Description / Abstract: What are the risks that the cocoa sector faces from climate change and what can be done to minimize those risks. Focus on telling a simple story for an industry audience.

Publication / Creation date: 2017-02-01

Language: en

Country: Dominican Republic

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn C, Mark L, Castro F. 2016. Climate smart cocoa value chains: Presentation at 3rd World Cocoa Conference - Bavaro, Dominican Republic. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79873>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark
- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D1289 - Identify supply chain stakeholders, training or extension services as potential users of project outputs

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
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Rainforest Alliance-United States	Noponen, Martin <mnoponen@ra.org>	Responsible
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D2697 - Climate smart cocoa value chains: Presentation at 6th European Cocoa Forum - Dubrovnik, Croatia

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79884>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate smart cocoa value chains: Presentation at 6th European Cocoa Forum - Dubrovnik, Croatia

Description / Abstract: What are the risks that the cocoa sector faces from climate change and what can be done to minimize those risks. Focus on telling a simple story for an industry audience.

Publication / Creation date: 2017-02-01

Language: en

Country: Croatia

Keywords: AGRICULTURE,FOOD SECURITY,CLIMATE CHANGE

Citation: Bunn C, Mark L, Castro F. 2016. Climate smart cocoa value chains: Presentation at 6th European Cocoa Forum - Dubrovnik, Croatia. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79884>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark
- Bunn, - Christian
- Castro, - Fabio

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D1290 - Map current adaptation/resilience training initiatives and projects relevant to the cocoa and/or coffee sector

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: <Not Defined>

License adopted: No

Deliverable Metadata

Disseminated title: <Not Defined>

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type

Rainforest Alliance-United States	Noponen, Martin <mnoponen@ra.org>	Responsible
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D2698 - Peak coffee? Die Folgen des Klimawandels für Arabica Kaffee: Presentation at Kaffeeröster-Tagung - Hamburg, Germany

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79869>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Peak coffee? Die Folgen des Klimawandels für Arabica Kaffee: Presentation at Kaffeeröster-Tagung - Hamburg, Germany

Description / Abstract: What are the risks that the coffee sector faces from climate change and what can be done to minimize those risks. Focus on telling a simple story for an industry audience.

Publication / Creation date: 2017-02-01

Language: en

Country: Germany

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Bunn C, Mark L. 2016. Peak coffee? Die Folgen des Klimawandels für Arabica Kaffee: Presentation at Kaffeeröster-Tagung - Hamburg, Germany. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79869>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark
- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2699 - Impacto del cambio climático en las cadenas productivas del café y cacao en el Perú

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79876>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Impacto del cambio climático en las cadenas productivas del café y cacao: Presentation at XIX Convencion nacional "Retos del café y cacao frente al cambio climatico" - Lima, Peru

Description / Abstract: What is the projected impact of climate change on coffee and cocoa value chains globally and in Peru. What can be done to improve the resilience of these production systems to the projected impact of climate change?

Publication / Creation date: 2017-02-01

Language: es

Country: <Not Defined>

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn C, Mark L. 2016. Impacto del cambio climático en las cadenas productivas del café y cacao: Presentation at XIX Convencion nacional "Retos del café y cacao frente al cambio climatico" - Lima, Peru. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79876>

DOI: <Not Defined>

Creator / Authors:

- Bunn, - Christian
- Lundy, - Mark

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Bunn, Christian <c.bunn@cgiar.org>	Responsible

D2700 - Impacto del cambio climático en las cadenas productivas del café y cacao: Presentation ExpoCafé 2016

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79875>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Impacto del cambio climático en las cadenas productivas del café y cacao: Presentation at ExpoCafé 2016 - Lima, Peru

Description / Abstract: What is the projected impact of climate change on coffee and cocoa value chains globally and in Peru. What can be done to improve the resilience of these production systems to the projected impact of climate change?

Publication / Creation date: 2017-02-01

Language: es

Country: Peru

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bunn C, Mark L. 2016. Impacto del cambio climático en las cadenas productivas del café y cacao: Presentation at ExpoCafé 2016 - Lima, Peru. Copenhagen, Dinamarca: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79875>

DOI: <Not Defined>

Creator / Authors:

- Lundy, - Mark
- Bunn, - Christian

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Lundy, Mark <m.lundy@cgiar.org>	Responsible

D2781 - Learning Community for Private Sector Investment in CSA

Main Information

Type: Outreach products

Subtype: Presentation/Poster

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: No

Open access restriction: Not Disseminated

License adopted: No

Deliverable Metadata

Disseminated title: Learning Community for Private Sector Investment in CSA

Description / Abstract: Overview of Year 1 activities for the private sector advisory council

Publication / Creation date: 2017-01-01

Language: EN

Country: Global

Keywords: CSA, Private Sector

Citation: CCAFS, 2017. Learning Community for Private Sector Investment in Climate Smart Agriculture: Overview Year 1 for CSA Advisory Council.

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Daniels - S.

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Deliverable Data sharing

Deliverable files:

<https://marlo.cgiar.org/data/ccafs/projects//57/deliverableDataSharing/CSA%20Overview%20for%20Advisory%20Council%20v3.pdf>

Partners contributing to this deliverable:

Institution	Partner	Type
SFL - Sustainable Food Lab	Daniels, Stephanie <stephanie@sustainablefood.org>	Responsible

5.3 Project Highlights

Project highlight 179

Title: Sharing climate science with the global coffee and cocoa sectors



Author: Mark Lundy

Subject: CSA, private sector, cocoa, coffee

Publisher: CCAFS

Year reported: 2016

Project highlights types:

- Innovative non-research partnerships
- Successful communications
- Policy engagement

Is global: Yes

Start date: Jan 2016

End date: Dec 2016

Keywords: CSA, private sector, cocoa, coffee, SCAA, ASIC, World Cocoa Foundation

Countries:

Highlight description: 2016 was the year in which climate information and a road map of how to translate this information into action moved onto the global stage. The Climate Smart Value Chain project of CCAFS engaged in multiple high-level global events with key industry partners to explain the projected impact of climate change on key coffee and cocoa producing regions, identify possible approaches to build resilient value chains and unlock private investment to drive wide-spread uptake of CSA practices.

Introduction / Objectives: To date efforts have been made to identify the relative exposure of crops and geographies to climate change. While these studies have been effective in highlighting the risks faced by these systems and participating smallholder farmers, they have been less effective in supporting adaptation activities at the field level. To effectively connect to site-specific activities such as those proposed in the project, the scale of analysis needs to be sharpened at the sub-national level. This project focuses explicitly on moving from risk assessment to action by influencing other key partners.

Results: Key note presentations at the premier global events on coffee: Specialty Coffee Association of America Re/Co Symposium and the 26th International Conference on Coffee Science. Key note presentations at the premier global events on cocoa: 3rd World Cocoa Conference and the World Cocoa Foundation's Partnership Meeting. In addition project results formed the basis for a

documentary on German television and appeared on the nightly news with a viewership of 1.3 million people.

Partners: CIAT, IITA, Sustainable Food Lab

Links / Sources for further information: <http://recosymposium.org/reco-atlanta/>
http://recosymposium.org/wp-content/uploads/2016/04/Reco_Atlanta_Program_2016.compressed.pdf
<https://www.youtube.com/watch?v=5SucB42f5jk>
<http://www.asic2016china.org/index.asp?id=19&cs=en&page=1>
<http://blog.ciat.cgiar.org/the-glory-of-coffee-in-china/>
<https://www.icco.org/about-us/icco-news/318-1-300-participants-address-sector-issues-at-the-third-world-cocoa-conference.html>
<http://www.worldcocoafoundation.org/event/2016-partnership-meeting-abidjan/>
<http://hdl.handle.net/10568/79800> <http://hdl.handle.net/10568/79801>

Project highlight 198

Title: Funding takes off for climate smart coffee and cocoa value chains

Author: Mark Lundy

Subject: CSA, private sector, cocoa, coffee

Publisher: CCAFS

Year reported: 2016

Project highlights types:

- Innovative non-research partnerships
- Capacity enhancement
- Inter-center collaboration
- Policy engagement

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords: CSA, private sector, cocoa, coffee, USAID

Countries: Guatemala, Uganda, Nicaragua, Côte d'Ivoire, United Republic of Tanzania, Rwanda, Ghana, El Salvador, Honduras

Highlight description: Based largely on the climate science and research direction pioneered by this CCAFS project, a total of 3 new development and research initiatives were approved in 2016 for a total of nearly 9 million dollars. USAID Feed the Future provided funding for two climate related initiatives on coffee and cocoa. The Climate Smart Coffee consortium, led by the Hanns R. Neumann Foundation, includes CCAFS, Conservation International, World Coffee Research, Root Capital and the Sustainable Food Lab. This project focuses on connecting global climate science with plot level agronomic practices in Central America and East Africa. Total USAID funding for this initiative was 6 million dollars. The Climate Smart Cocoa initiative, led by the World Cocoa Foundation, builds on CCAFS climate exposure mapping and private sector engagement work and includes ACDI-VOCA and several WCF partner companies such as Barry Callebaut, Cargill, Ecom Agrotrade, The Hershey Company, Lindt & Sprüngli, Mars, Inc., Nestlé, Olam International Ltd, and Touton. This initiative received 1.5 million dollars of funding from USAID. Finally CCAFS project members led by IITA competed successfully for a BMZ large grant to deepen existing work under the Climate Smart Value Chains project in both West African cocoa systems and East African coffee systems.

Introduction / Objectives: Expand the range of the Climate Smart Value Chain work supported initially by CCAFS geographically. Through additional funding, work started in three countries (Ghana, Peru and Nicaragua) expanded to encompass seven additional countries (Guatemala, Honduras, El Salvador, Cote d'Ivoire, Tanzania, Uganda and Rwanda). Additional activities in 2017 focus on expanding the crop focus beyond coffee and cocoa into food security crops such as maize.

Results: Nearly 9 million dollars in complementary bilateral funding secured through innovative research in development partnerships.

Partners: Hanns R. Neumann Foundation, World Cocoa Foundation, USAID, CIAT, IITA, Root Capital, Sustainable Food Lab

Links / Sources for further information:

<https://www.hrnstiftung.org/projekte/feed-the-future-partnership-for-climate-smart-coffee>

<http://www.worldcocoaoundation.org/wp-content/uploads/FINAL-CSC-program-announcement-5-31.pdf>

6. Activities

A3 - Site & crop specific CSA identified by exposure gradient

Description: Based on exposure gradient, relevant climate drivers are identified. These feed into participatory processes with producer associations to identify site and crop specific CSA practices that are most promising for inclusion into certification training and investment vehicles.

Start date: Jan 2015

End date: Dec 2018

Activity leader: Rainforest Alliance-United States Noponen, Martin <mnoponen@ra.org>

Status: On-going

Overall activity or progress made during this cycle: Significant advances on this in Ghana and more modest advances in Peru. Ghana results can be extrapolated for use in other cocoa producing countries while Peruvian results can be used for coffee in LAM. IITA produced initial methods and tools for 'step-wise investment strategies' for diverse household typologies also tied to uptake of CSA practices. For 2017 these two workstreams need to merge to develop final tools for use in country and exposure gradient specific policy briefs tied to new USAID bilateral funding.

Deliverables in this activity:

- D169: Strategically identify learning sites along gradients of climate vulnerabilities (Ghana & Peru)
- D1289: Identify supply chain stakeholders, training or extension services as potential users of project outputs
- D1290: Map current adaptation/resilience training initiatives and projects relevant to the cocoa and/or coffee sector

A5 - Incorporation of CSA practices by crop and gradient into voluntary certification training

Description: Define methods and approaches to incorporate identified CSA practices by crop and gradient into Rainforest Alliance training materials for coffee and cocoa farmers in Nicaragua, Peru and Ghana. Engage with peer agencies organized in the ISEAL alliance to replicate this process with other voluntary certification bodies. Influence uptake of methods and approaches from the project by additional farmer associations and public extension services.

Start date: Jun 2015

End date: Dec 2018

Activity leader: Rainforest Alliance-United States Nojonen, Martin <mnojonen@ra.org>

Status: On-going

Overall activity or progress made during this cycle: Significant advances on this in Ghana and more modest advances in Peru. Rainforest Alliance seeks to align this with an updated version of the SAN Standard which underpins their global certification work in 2017. The overall SAN update target for this is 1.2m producers. Additionally Rainforest Alliance convenes and leads a working group with peer voluntary certification agencies in ISEAL on climate change. This working group constitutes an important part of the scaling pathway of the project as it serves to share methods and approaches to incorporate climate science into certification schemes. These schemes currently reach between 30 and 40% of global cocoa and coffee producers.

Deliverables in this activity:

- D171: Produce user-friendly, site specific training and extension materials and tools for scaling up
- D188: Workshops with certification trainers from private sector and NGOs to adopt adaptation materials
- D189: Support farmer field schools on climate change adaptation provided by private sector and NGO trainers
- D190: Sensitize and build capacity of government extension services to use adaptation training materials

A15 - Exposure gradient mapping of coffee, cocoa and food crops; site and crop specific CSA identified

Description: Coffee and cocoa are very susceptible to increased temperature and changing precipitation patterns and therefore significant impact on these crops are foreseen. In this activity we will model the impact on coffee, cocoa and the food crops that these farmers grow to establish a exposure gradient, from low over medium to high changes in suitability. Site specific CSA practices and packages will be identified and through ex-ante and trade-off analysis their potential to CSA assessed.

Start date: Jan 2015

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Bunn, Christian
<c.bunn@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: Exposure gradient mapping for Ghana, Ivory Coast (cocoa) and Peru (cocoa and coffee) are completed and were shared with local stakeholders at conferences. Publications are being drafted for Ghana and Ivory Coast, the Peru work is being picked up in local extension material. Coffee gradients for Central America and East Africa on coffee were developed and need local verification. Progress has been made towards closing the gap between climate hazards identified from global climate models and perceived hazards of local stakeholders. The latter will be important to link CSA practices developed in participatory approaches to projected climate threats. For Ghana and Peru CSA practices have been identified for cocoa and coffee (as in Activity 3). In the next months for Ghana and Peru costs and benefits of CSA practices will be evaluated for different exposure zones while accounting for site specific hazard risk scenarios.

Deliverables in this activity:

- D119: Exposure analysis for coffee, cocoa and relevant food crops for Ghana, Peru and Nicaragua
- D120: CSA practices along exposure gradient identified and ex- ante analysis and trade-off analysis conducted
- D2277: Turning local knowledge into an online decision-support tool for tree selection in smallholders' farms
- D2278: Soil fertility gradients and production constraints for coffee and banana on mountain slopes in Africa
- D2279: Towards collaborative research: Linking science to farmers' perceptions and knowledge on coffee pests and diseases
- D2280: Vulnerability to Climate Change of Cocoa in West Africa: Patterns, Opportunities and Limits to Adaptation
- D2283: Replication Data: Vulnerability to climate change of cocoa in West Africa
- D2282: Replication Data: From site-level to regional adaptation planning for tropical commodities: cocoa in West Africa
- D2281: From site-level to regional adaptation planning

A71 - Design, Incorporate and Scale innovative Climate-Smart financial products into investment vehicles.

Description: Create methodology and approach to operationalize identified CSA best practices into Root Capital's tailored financial products and investment vehicles for different gradients with coffee and cocoa farmers in Nicaragua, Peru and Ghana. Design and standardize underwriting guidelines for long-term renovation and related adaptation investments. Train Root Capital loan officers to identify CSA best practices and incorporate learning into credit decisions and consultations with clients. Engage with peer institutions in the Council for Smallholder Agriculture Finance to replicate and scale financial products for climate adaptation and mitigation based on project results. Disseminate information and share knowledge among larger community of financial institutions, certification bodies, development practitioners, foundations, convening organizations and value chain actors to influence larger action and catalyze a growing market for CSA based financial products that are customized to needs of each unique situation.

Start date: Jan 2015

End date: Dec 2018

Activity leader: Root Capital-United States Teague, Elizabeth <eteague@rootcapital.org>

Status: On-going

Overall activity or progress made during this cycle: During the reporting period, our primary achievement was mapping Root Capital borrowers against the climate change exposure gradients identified by CIAT for cocoa in Ghana and coffee and cocoa in Peru. We also continued to support project partners' activities, particularly related to cost-benefit analysis. Beyond these activities, we largely waited for other partners to complete their deliverables – namely recommendations for CSA practices with accompanying cost-benefit analysis – while will form the basis for future Root Capital work. We continue to hold internal discussions, which remain in scoping stage, pending the completion of these deliverables.

Deliverables in this activity:

- D193: Train relevant Root Capital staff in climate exposure and key adaptation pathways
- D195: Promote scaled finance for CSA investments through knowledge-sharing with peer impact investors
- D1146: Create learning products for impact investor audience
- D1147: Promote scaled finance for CSA investments through knowledge-sharing with other FIs and interested stakeholders
- D191: Introduce climate change risks and adaptation recommendations into underwriting strategies for cocoa in Ghana

A75 - Multi-stakeholder engagement for scaling adoption of practices, learning and scope of impact

Description: Map the ecosystem of engagement at national and global levels to support implementation of CSA practices in coffee and cocoa farming systems, at farm and landscape level. Utilize various engagement processes (fora, bilateral consultation, value chain roundtables) to share project learnings to maximize uptake or results, reach and impact. 1)National MSP: Identify and convene key actors from the coffee and/or cocoa value chains (public,private,NGOs,etc.) critical for providing market incentives for practice adoption. Review and evaluate results from exposure gradient work, assist in identifying key partners for building CSA practices and identifying new climate smart investment opportunities. Provide a forum for on-going review of project activities and project scaling at national level. 2)Global: Identify global partners, spaces and events relevant to project outputs, particularly industry actors and venues necessary to the market incentive for practice adoption Facilitate on-going discussions with key actors to share results and build momentum for scaling

Start date: Jan 2015

End date: Dec 2018

Activity leader: SFL - Sustainable Food Lab Daniels, Stephanie <stephanie@sustainablefood.org>

Status: On-going

Overall activity or progress made during this cycle: The Sustainable Food Lab supported the process of mapping the stakeholders in Peru. Key stakeholders were identified and follow up meetings held with each, mapping out strategic intersections for work on climate change adaptation in 2016 onwards. These meetings contributed to the success of in person meetings with CIAT and the presentations of project work at ExpoCafé in October 2016. SFL staff attended and supported the presentation of research at the 2016 SCAA April meeting, 2016 World Cocoa Congress in May 2016, Forum for Resilience in Coffee-Dependent Communities in Central America and the Caribbean September 2016 and at the World Cocoa Foundation Partnership meeting in Abidjan in October 2016. this effort has led to high level collaboration with the cocoa sector's main industry body: the World Cocoa Foundation; and the coffee& climate initiative of Hanns R. Nuemann Stiftung. USAID provided 7.5m in bilateral funds to support this collaboration.

Deliverables in this activity:

- D198: Engagement strategy for national level platforms
- D199: National level forum - in one of project countries, likely Ghana
- D200: Global multi-stakeholder engagement
- D1204: National level forum - held in different project country
- D1205: Global multi-stakeholder engagement
- D1206: National level forum - held in 3rd project country
- D2284: Climate Smart Agriculture in the Coffee Sector
- D2285: Climate Change in the Supermarket
- D2286: Climate change in coffee on German National TV news
- D2692: Unlocking Private Sector Investment in Sustainable Agriculture
- D2693: Climate Smart Agriculture in the Global Coffee Sector: Presentation at Re;Co Annual Symposium
- D2694: Is our chocolate melting away?: Presentation at Agri-chains & Sustainable Development
- D2695: Climate smart cocoa value chains: Journées Nationales du Cacao et du Chocolat - Ivory Coast
- D2696: Cli

7. Leverages

No leverages added

Title: Putting climate into extension services: Climate-Site-Specific Management Systems (CSMS) for grounding climate smart agriculture to farm rice systems

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2018	RP LAM	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2, Bilateral	On-going	CIAT - Centro Internacional de Agricultura Tropical - Colombia	Jimenez, Daniel <d.jimenez@cgiar.org>

Project is working on

Flaship(s)
F2 (before F1 - Andy): Climate-Smart Technologies and Practices

Region(s)
LAM: Latin America

Project summary

Unpredictable climate is challenging farmers in Latin America (LAM) with changing, complex and extremely variable conditions for agriculture. New approaches to rural advisory services are required to support farmers' decision making processes and boost their resilience to the impacts of climate change. For this we propose to develop a Climate-Site-Specific Management System (CSMS) that allows farmers and technicians in LAM to contribute with data on soil, crop management and production in return for tailored, site-specific information on Climate Smart Agriculture options (CSA options). The approach will be implemented for rice systems in Colombia, Nicaragua and Peru and will be conducted jointly with the Latin American Fund for Irrigated Rice (FLAR).

2. Partners

Partner #1 (Leader)

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Jimenez, Daniel <d.jimenez@cgiar.org>	To ensure that: (a) the science of the CSMS is of high quality, (b) achieves impact, (c) is strategically positioned, while also mobilizing more resources for the research and continuity of the CSMS (Bilateral projects and others), (d) providing feedback to CCAFS to improve communication, methods and in general accomplish goals, (e) represent CCAFS internationally	HQ
Project Coordinator	Munoz, Armando <l.a.munoz@cgiar.org>	To: (a) make knowledge management and capacity building in partner, facilitating the sustainability of CSMS, (b) Identify knowledge, needs and skills of partners regarding the management and use of data, (c) design strategies to achieve social appropriation of the technologies generated by CSMS, (d) Facilitate processes of capacity building to improve the institutional and professional capacities of partners and (e) Validate and reinforce knowledge, assuring the use of the technologies by the end users.	HQ
Project Coordinator	Graterol, Eduardo <e.j.graterol@cgiar.org>	To: (a) coordinate research and management FLAR partners in each country, (b) socialize the achievements of the CSMS with FLAR's partners, (c) align the results achieved with the needs of other countries/ FLAR's partners, (d) identify the mechanisms and ways to scale up the CSMS in other countries	HQ

Partner #2

Institution: FLAR - Fondo Latinoamericano para Arroz de Riego

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Graterol, Eduardo <e.j.graterol@cgiar.org>	To: (a) coordinate research and management FLAR partners in each country, (b) socialize the achievements of the CSMS with FLAR's partners, (c) align the results achieved with the needs of other countries/ Flar's partners, (d) identify the mechanisms and ways to scale up the CSMS in other countries Activity 2014-14 *Partner*. Activity 2014-16 *Partner*. Activity 2014-79 *Leader*.	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	Despite knowing the different scenarios of data availability in the countries, the technical limitations lack of both infrastructure and an ambassador in place to move forward the project in Nicaragua and Peru (ANAR and Hacienda el Potrero) respectively have make difficult a similar development to that achieved with Fedearroz in Colombia.

Partnerships overall over the last reporting period:

FLAR and the partners in the countries keep their interest of making more informed decisions on best CSA options through the CSMS. Nevertheless , due to the budget cuts earlier 2016 the interaction with farmers was significantly reduced as there is no money to support data collection in the field. The pilot scheme for scaling up has been mainly focused in Colombia and Nicaragua

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
District	3.9251	-75.0171	Colombia: Tolima
District	12.8967	-86.0529	Perú: Jaen,
District	-5.6113	-78.839	Nicaragua: Malacatoya, Sebaco, Matagalpa y San Luis

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:

We will develop a CSMS based that will allow farmers and growers associations in LAM to obtain site-specific information on Climate-Smart Practices (CSP). At the end of the project farmers as well as FLAR and CIAT breeders & agronomists use the CSMS to better understand site-specific information on the response of crop varieties to climate in order to improve the management of current varieties and identify the best CSP. The CSMS will allow in the short-term, at least 1000 farmers to: (i) adapt their management practices to climate variability and (ii) maximize their productivity. As the system is developed together with FLAR the system has the potential to reach more than 300 000 rice growers in the long-term.

Annual progress towards outcome (end of 2016*): Analytical tools validated and ready to process agricultural and environmental information from the rice growing areas of Colombia and Nicaragua. Beta version of CSMS used by technicians and farmers in Colombia and Nicaragua. Researchers from FEDEARROZ in Colombia interacting with lead CIAT/CCAFS researchers with regards to the multi-temporal scale prediction of best CSP, and then making decisions on which varieties, varietal traits and other Climate Smart Practices are more likely to work in the mid-term.

Annual progress towards project outcome in the current reporting cycle (2016*): In Colombia, Fedearroz is using through a team of professionals the beta version of CSMS (understood as managing and analyzing secondary sources of information, empower technicians with the tools to do it and find mechanisms to disseminate CSA options). Technicians in the field validate the results of the analyzes and communicate to the farmers CSA options, through their AMTEC rural advisor strategy (<http://www.fedearroz.com.co/new/amtec.php>). In addition a scientific paper identifying SA options has been published. In Nicaragua, technicians from two rice farms (part of the pilot scheme) are applying the beta version of the CSMS to improve the productivity on their farms, they are now capable of identifying CSA options using novel data mining analytical tools and making more informed decisions on the best CSA options.

How communication and engagement activities have contributed to achieving your Project outcomes:* The implemented communication and dissemination strategies led to institutional changes. Technicians are now aware of existing information of CSA options and have better knowledge and skills for collecting, managing, storing and analyzing information. They changed the traditional way of doing it and use modern information technologies to make such processes more efficient. The analytic capabilities have been strengthened through data mining tools. We have reached a wider audience through presentations in events, blog posts and publication of 2 scientific papers in open access journals. In Nicaragua, the potential of the CSMS has been shown to government agencies, and research organizations.

Evidence documents of progress towards outcomes:* <Not Defined>

Annual progress towards outcome (end of 2015): Diagnosis of partners needs in the three countries will be used by CIAT's researchers and FLAR's director, partners, agronomists and technicians to define the strategy for each country. This diagnosis is the baseline of the development of both, protocol for standardized agricultural and gender information at site-specific level and the pilot of the CSMS. FEDEARROZ will use the report of target CSP as a baseline to improve its current strategies to store and manage data.

Annual progress towards outcome (end of 2017): Beta version of the CSMS used by agronomists, technicians and farmers in Colombia and Nicaragua. Android app used to collect information in Colombia, and Nicaragua. The capabilities of researchers, and agronomists, are strengthened in terms of the analytic capabilities as well as awareness along the technical assistance chain on the importance and usefulness of the data analysis workflow.

Annual progress towards outcome (end of 2018): Modelling approaches validated and adapted according to the richness of the data available within each country. This information will be used by FLAR and CIAT breeders & agronomists to better understand the response of crop varieties to climate, releasing more resilient germplasm, providing at least 1000 farmers with site-specific recommendations. CIAT's rice program including breeders and agronomists, as well as breeders and agronomists from FLAR will be the scientific users of the CSMS.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* Rice farms in Nicaragua (part of the pilot scheme) have expressed their concern about the use of the web platform developed as part of the CSMS to collect information (<http://www.open-aeps.org:8080/locale.action?countryCode=CO=>) . They are afraid of having their data on either cloud or servers beyond their control. This fact suggests that changes are needed in the attitude and assumptions of the institutions

4.2 CCAFS Outcomes

RP LAM Outcome 2019: LAM's producers associations are choosing and promoting CSA context-specific practices through strengthened extension services rescuing ancient and traditional knowledge. Local governments develop equitable local agricultural development plans using CSA context-specific portfolios assessed economically to plan and prioritize their investments focusing on climate variability challenges. NARS develop demand-driven outputs with sufficient technological capacity to address agricultural sector needs to face climate challenges. Private sector works with producer's associations, local and national governments to implement and scale out CSA involving agricultural market agents through innovative approaches (incentives along value chain to access to certification schemes). National governments scale up CSA approach based on successful experiences developed at local level.

Indicator #1: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019
<p>Target value: 7</p> <p>Cumulative target to date: 10</p> <p>Target narrative: Through Bilaterals in addition to institutions in Colombia, Nicaragua and Peru, Argentina and Uruguay , we will involve 2 more institution in Brasil and Mexico. FLAR as continent-wide rice growers association with all their partners will benefit of the CSMS .FLAR is a public-private alliance investing in a common platform for rice development.Our partners have different needs and capacities since each of them are deferentially advanced in data availability on rice production. Colombia can be considered with high data availability, Nicaragua medium and Peru low due to weakness of institutions</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: Improved the capacity of women in the participation of decision-making through the access of site-specific information.</p>
2015
<p>Target value: 1</p> <p>Cumulative target to date: 1</p> <p>Target narrative: Given that FEDEARROZ is the scenario with more data availability, in the first year Colombia through FEDEARROZ will be our target. FEDEARROZ will use the report of target CSP as a baseline to improve its strategies for storing and managing data. Improving their current strategies to collect and manage information</p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2016

Target value: 2

Cumulative target to date: 3

Target achieved: 2.0

Target narrative: FEDEARROZ and ANAR are the scenario with high and medium data availability respectively, therefore, they count on knowledge, attitudes and skills on how to: (a) collect information on soils, crop management, climate and yield, and (b) data management. FEDEARROZ in Colombia implement both mid and long-term strategies to make more informed decisions on, for example, the most appropriate varieties according to predicted and/or projected climate change scenarios and is capable of designing a long-term vision of an adapted rice sector for the country.

Narrative for your achieved targets, including evidence: FEDEARROZ and ANAR (technicians from farms part of the pilot scheme) have changed their attitude and way of making decisions on best CSA options. Now those decisions are supported by the analysis of information. Both have now the capacity of collecting, managing, storing and analyzing information through modern information technologies tools. FEDEARROZ can now support its rural advisory strategy AMTEC making more tailored CSA options. In Nicaragua technicians generate information on best CSA options on-farm, which help the sustainability and employment of more than 12,000 agricultural day laborers.

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Our experience in Nicaragua and Tolima (Colombia) suggested that women and young people had higher affinity and skills to use the ICT tools. We subscribe to the view of social inclusion: not just of gender but youth. The latter with potential to transform agriculture. Due to high costs of conducting gender surveys and budget cuts in early 2016, we started in late 2017 a strategy to empower youth (including women, indigenous) through training programs on new skills to manage, and analyze data, working closely with local universities. Evidence of this initiative will be reported in the next cycle.

The expected annual gender and social inclusion contribution to this CCAFS outcome: Women from two communities in Nicaragua have strengthened the required skills to facilitate their sustainable use of the CSMS. Rice smallholder farmers (women and men) in Nicaragua improve their knowledge related to climate, soil and management practices and their effect on yield. FEDEARROZ in Colombia recognize women's participation in decision-making and labor in the rice production systems in Tolima department (a community in Saldaña).

Major Output groups:

- F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)
- F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)
- F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network,

multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:

Activity 2014-16: FSMOG1 to Context specific targeted climate smart practices options that meet the needs of farmers and enhance productivity (FP12019), and FS1 to FP12019

Collaborating with other CRPs

<This project does not have a CRP selected yet.>

4.4 Case Studies

Case Study #131

Title: As a result of CIAT-CCAFS science Farmers Associations across Colombia have institutionalized climate specific management

Year: 2016

Project(s): P58

Outcome Statement: FEDEARROZ, major rice farmer association representing approximately 24 000 Colombian producers, institutionalized CIAT-CCAFS climate sites specific management recommendations and built capacity among its members. Farmer association technicians were trained in statistical modeling tools and agricultural management strategies; as a result they are now incorporating specific research on climate sites specific management and producing their own climate forecasts to make informed agricultural decisions. The agroclimatic recommendations and the use of improved data have been shared with FEDEARROZ members by using applications.

Research Outputs: Site specific data- datasets on rice cropping events corresponding to fields in two regions of Colombia.

<https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/MGUTG3> \CIAT-CCAFS

Standard protocol for capturing information for Climate-Site Specific Management (CSMS):

https://github.com/bigdataciat/Protocolo_captura_de_datos Capacity Building Techniques: CIATs

Knowledge Management team, jointly with FEDEARROZ, used CIAT-CCAFS research on climate forecasts and agronomic practices to design four types of actions: Socialization, Training, Capacity Building, and Internships to be used in the Convenio, Report attached in annex "Reporte sobre acciones de fortalecimiento de capacidades" Convenios MADR/CIAT/FEDEARROZ (c-245-12 & c-059-15)"

Research Partners: FEDEARROZ

Activities: CIAT-CCAFS Big Data/AEPS analysis team provided capacity building to association technicians; trainees experienced changes in attitude, technical knowledge of modern analysis tools, skills in interpreting results. With new skills FEDEARROZ, developed a centralized data repository in Bogota and standardized data collection formats nationally. After recognizing the utility of site-specific data, FEDEARROZ hired a meteorologist, designed and instituted a position to lead the generation of climatic forecasts. This work is part of the 2014 agreement (Convenio) with CIAT, Ministry of Agriculture, and national farmer associations to find/apply alternatives so Colombian agricultural sector can adapt to local conditions and improve use of natural resources. In a pilot study of the Capacity Building model in FEDEARROZ, results of trainings were tested. FEDEARROZ technician Francisco Hernández verified that the practices of the association members have changed with the addition of the new analysis skills.

Non-Research Partneres: Ministry of Agriculture and Rural Development (MADR) Convenio Partners: National Federation of Rice Producers (FEDEARROZ), National Federation of Cearal Lugume Farmers (Fenalce), Center of Research in Palm Oil (Cenipalma), Corportation Biotec, Foundation Cipav, Horticultural Association of Colombia (ASOHOFRUCOL)

Output Users: 2 technicians and researchers in FEDEARROZ

Evidence Outcome: Pilot Study, interviews w/FEDEARROZ: "Historias destacadas de Fortalecimiento de Capacidades" (graphic & report uploaded) "Actions to Strengthen Capacities »" by Convenio Partners ("Reporte Sobre Acciones De Fortalecimiento De Capacidades") (uploaded) "Analysis of Large Volumes of Commercial Rice Data," Event

Testimonies: <http://blog.ciat.cgiar.org/es/big-data-el-equipo-que-no-descansa/> "Climate-Site-Specific Management Systems (CSMS) for grounding climate smart agriculture to farm rice systems": ftp://ftp.ciat.cgiar.org/DAPA/projects/BIGDATA_AEPS/REPORTES/FLAGSHIP/EvidenciaCCAFS.pdf

Output Used: Technicians from FEDEARROZ apply skills in data analysis learned through workshops and trainings to improve analysis of agronomic/climatic data collected in their work with farmers. Technicians improved the lines of communication by connecting on a mobile application and meet weekly to share weather forecast updates.

References Case: CIATBlog, "Los gremios colombianos entran a la era de los datos":

<http://blog.ciat.cgiar.org/es/los-gremios-colombianos-entran-a-la-era-de-los-datos/> CIATblog, "First successes in strengthening researchers' capacities in facilitating participatory meetings"

<http://blog.ciat.cgiar.org/first-successes-in-strengthening-researchers-capacities-in-facilitating-participatory-meetings/> DAPABlog—describes rice project:

<http://dapa.ciat.cgiar.org/agricultores-de-arroz-comprometidos-con-el-analisis-de-datos-para-enfrentar-la-variabilidad-climatica/> CIATBlog about method used in pilot study-Five questions to monitor and strengthen knowledge on climate forecasting:

<http://ciatblogs.cgiar.org/knowledgemanagement/5q-conocimientos-pronosticos-climaticos/>
Convenio video: https://www.youtube.com/watch?v=5_BgooveTdY

Primary 2019 outcome indicator(s):

- # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

Link between outcome story and the FP Outcome(s): <Not Defined>

Annex uploaded:

<https://marlo.cgiar.org/data/ccafs/projects//58/caseStudy/encuestas%205Q%20pronostico.pdf>

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Major Output groups - 2016

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: * ICT platform * Strategic partnership with ANAR, FEDEARROZ, Hacienda el potrero, and other institutions in Uruguay and Argentina

Brief summary of your actual 2016 contribution towards the selected MOG: The contribution to an innovative knowledge management system are the four strategies proposed for capacity building for researchers and technicians. The use of a Web platform for data collection, the publication of scientific results in open data journals is a clear contribution to facilitate access. (see also Mog above)

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: Training on the use of ICT (web platform/ internet- based system) for data collection.

Summary of the gender and social inclusion dimension of the 2016 outputs: The gender and social inclusion dimension has been addressed through the processes of capacity building building of youth. 25% of the participants were women and more than 60% are young people.

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: * Scientific publication on; (a) the scalability of site-specific agriculture and the principles of CSMS to other countries * (b) assessment of the performance of varieties in the short medium and long-term (multi-decadal) (c) An integrated framework to accelerate trait discovery for specific environments

Brief summary of your actual 2016 contribution towards the selected MOG: In one farm, 4 CSA options that lead to high productivities were identified for Variety Palo2 : To plant rice between January and December, No weeds in early stages of development, apply phosphorus in rainy season, to reach at the end of the rice cycle 210 plants / mt2

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: Feedback on the functionality of the web platform for the collection of data from family rice production systems.

Summary of the gender and social inclusion dimension of the 2016 outputs: The gender and social inclusion dimension has been addressed through the processes of capacity building building of youth. 25% of the participants were women and more than 60% are young people.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: *

Analysis of biophysical information to predict technologies to derive short- and medium-term outlooks of rice production and best performing Climate Smart practices

Brief summary of your actual 2016 contribution towards the selected MOG: • Next users are aware of how to collect, manage, store and analyze information through modern information technologies, and use it to make decisions on best CSA options. • FEDEARROZ can support its extension service making more tailored CSA options • Training of at least 30 technicians from 8 countries

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output:

The participation of women and youth will enable sustainability and scaling

Summary of the gender and social inclusion dimension of the 2016 outputs: Due to high costs of conducting gender surveys and budget cuts in early 2016, we started in late 2017 a strategy to empower youth, training them on new skills to manage, and analyze data, working closely with local universities. Evidence of this initiative will be reported in the next cycle

Major Output groups - 2015

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: • Next users are aware of how to make the process of managing and analyzing data more efficient through ICTs technologies o Training of fourteen Nicaraguans` technicians on the use of the management system (AEPS platform. <http://www.open-aeps.org:808>)

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output:

<Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: Survey and focus groups found that women and young people have a higher affinity and skills to use ICTs as a means of accessing information. The implementation of CSMS, or similar tools including data collection, interaction with information systems to facilitate decision-making, should strengthen the participation of women.

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: • Next users identify through exploratory analysis the best Climate-Smart Practices in 4 countries • Next users identify through exploratory analysis the best Climate-Smart Practices in specific regions within 4 countries

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: The CSMS, is mainly used to capture traditional knowledge, however during the project has not been differentiated if the information collected comes from the work of men or women.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: Next users are aware of how the importance and usefulness of the data analysis workflow

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: Survey and focus groups found that women and young people have a higher affinity and skills to use ICTs as a means of accessing information. The implementation of CSMS, or similar tools including data collection, interaction with information systems to facilitate decision-making, should strengthen the participation of women.

Major Output groups - 2014

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: • Next users identify through exploratory analysis the best Climate-Smart Practices in 4 countries • Next users identify through exploratory analysis the best Climate-Smart Practices in specific regions within 4 countries

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: The CSMS, is mainly used to capture traditional knowledge, however during the project has not been differentiated if the information collected comes from the work of men or women.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

5.2 Deliverables

D1079 - Data capture protocol for standardized climate, soil and management information at site-specific level

Main Information

Type: Training materials

Subtype: User manual/Technical Guide

Status: Complete

Year of expected completion: 2016

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<https://github.com/bigdataciat>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Protocolo estandarizado de captura de informacin necesaria para CSMS

Description / Abstract: A document with: a) basic concepts on data collection, b) identification and extraction of data from secondary sources, c) data dictionaries and d) data storage.

Publication / Creation date: Coming soon

Language: Spanish

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Dorado - Hugo

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Jimenez, Daniel <d.jimenez@cgiar.org>	Responsible

FLAR - Fondo Latinoamericano para Arroz de Riego	Graterol, Eduardo <e.j.graterol@cgiar.org>	Other
--	--	-------

D138 - Databases with readily-available information on soils, crop management, climate and yield

Main Information

Type: Data, models and tools

Subtype: Database/Dataset/Data documentation

Status: Complete

Year of expected completion: 2016

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/79899>

Open access: Yes

License adopted: CC_BY_NC_SA

Deliverable Metadata

Disseminated title: Bases de datos de cultivos de arroz en Colombia, Nicaragua y Perú con información en suelos, manejo de cultivo, clima y rendimiento

Description / Abstract: El documento tiene la finalidad de describir las bases de datos reunidas por el equipo de análisis de CIAT, que retratan la actividad arrocerera en Colombia, Nicaragua y Perú. Esto fue posible gracias a la acción del Fondo Latinoamericano de Arroz de Riego (FLAR) y a sus miembros en cada país: Fedearroz (Colombia), ANAR (Nicaragua) y Hacienda el Potrero (Perú). De igual forma es de destacar la colaboración recibida por parte de los agricultores de Ibagué, del Boaco y de la provincia de Jaén.

Publication / Creation date: 2016-08-01

Language: spanish

Country: COLOMBIA,NICARAGUA,PERU

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Aguilar A, Muñoz LA, Jimenez DR. 2016. Bases de datos de cultivos de arroz en Colombia, Nicaragua y Perú con información en suelos, manejo de cultivo, clima y rendimiento. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/79899>

DOI: <Not Defined>

Creator / Authors:

- Delerce - Sylvain
- Dorado - Hugo
- Jimenez - Daniel
- Federación Nacional de Arroceros (Fedearroz), -
- Federación Nacional de Arroceros (Fedearroz), -

- Aguilar - Andres
- Muñoz, - Luis Armando

Deliverable Quality check

FAIR Compliant: **F A I R**

Process of data quality assurance: <Not Defined>

Data dictionary: <Not Defined>

Are the tools used for data collection available: <Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Graterol, Eduardo <ej.graterol@cgiar.org>	Responsible

D2730 - Scientific paper : Assessing weather-yield relationships in rice at local scale using data mining approaches

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Dataverse (Harvard)

Dissemination URL:

<https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/MGUTG3>

Open access: Yes

License adopted: CC_BY_NC_SA

Deliverable Metadata

Disseminated title: Rice cropping events data for Saldaña (lowland irrigated rice) and Villavicencio (rainfed rice), Colombia

Description / Abstract: These two datasets hold basic information on rice cropping events corresponding to fields of two regions of Colombia: Saldaña (Tolima) and Villavicencio (Meta). This include municipality, variety, cropping system (irrigated/rainfed), sowing and harvesting date, and yield.

Publication / Creation date: 2016-08-01

Language: English

Country: Colombia

Keywords: Latin America and the Caribbean, DAPA, Rice, Irrigated Land, Colombia, Cropping Events, Rainfed Farming

Citation: Federación Nacional de Arroceros (Fedearroz), 2015, "Rice cropping events data for Saldaña (lowland irrigated rice) and Villavicencio (rainfed rice), Colombia", doi:10.7910/DVN/MGUTG3, Harvard Dataverse, V3, UNF:6:6lHWbC2OQC5P1hoiuuoz0Q==

Handle: <Not Defined>

DOI: doi:10.7910/DVN/MGUTG3

Creator / Authors:

- Federación Nacional de Arroceros (Fedearroz), -
- Delerce - Sylvain
- Dorado - Hugo
- Jimenez Rodas - Daniel<orcid.org/0000-0003-4218-4306>

Publication Metadata

Volume: 11

Issue: 8

Pages: 25

Journal/Publisher name: PLoS ONE <http://dx.doi.org/10.1371/journal.pone.0161620>

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: Yes

Flagships contribution:

Deliverable Quality check

FAIR Compliant: **F A I R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Jimenez, Daniel <d.jimenez@cgiar.org>	Responsible

D235 - Ready-to-use analytical tools (R scripts, guidelines) developed that can be implemented

Main Information

Type: Data, models and tools

Subtype: Data portal/Tool/Model code/Computer software

Status: Complete

Year of expected completion: 2016

New expected year: 2016

Cross-cutting dimension:

- Capacity Development

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<https://github.com/bigdataciat>

Open access: Yes

License adopted: GNU

Deliverable Metadata

Disseminated title: Analytical tools repository AEPS - Bigdata CIAT

Description / Abstract: A script in R for analyze crops information with machine learning techniques. A guide and a toy set was included.

Publication / Creation date: 2016-12-01

Language: Spanish

Country: Colombia

Keywords: R, Data tools, Machine learning, Climate, Cluster, Agronomy

Citation: 2015, Grupo de Agricultura Específica Por Sitio y Big Data, Centro Internacional de Agricultura Trópica

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Dorado - Hugo
- Aguilar - Andres
- Patino - Victor

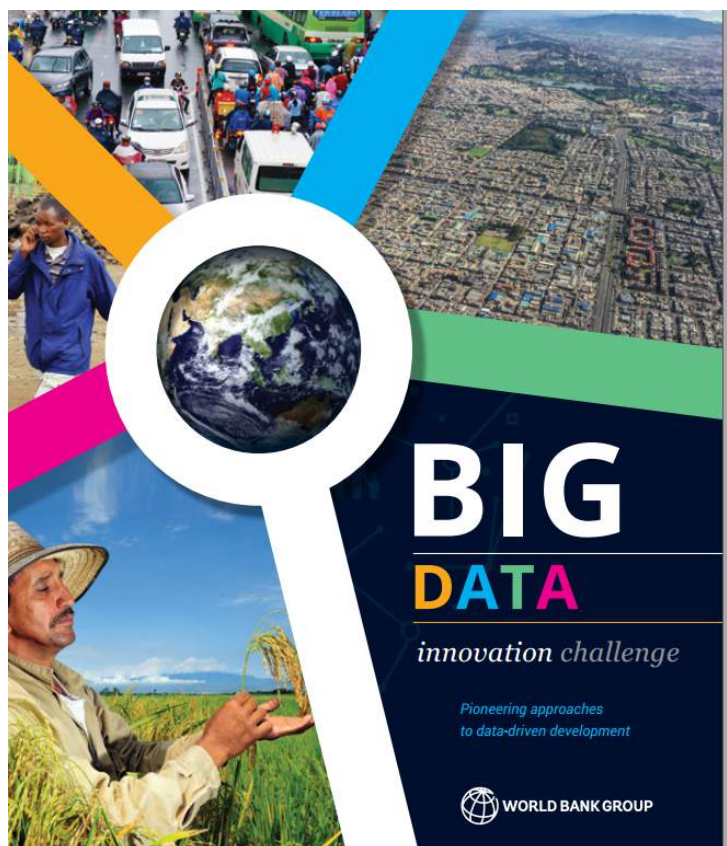
Partners contributing to this deliverable:

Institution	Partner	Type
FLAR - Fondo Latinoamericano para Arroz de Riego	Graterol, Eduardo <e.j.graterol@cgiar.org>	Responsible

5.3 Project Highlights

Project highlight 212

Title: Big Data Innovation Challenge: Pioneering Approaches to Data-Driven Development



Author: World Bank Group	Subject: Mining Big Data for Climate-Smart Agriculture
Publisher: © World Bank	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Participatory action research • Inter-center collaboration 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords:	Countries:
Highlight description: World Bank Group. 2016. Big Data Innovation Challenge : Pioneering Approaches to Data-Driven Development. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/25102 License: CC BY 3.0 IGO.	
Introduction / Objectives: <Not Defined>	
Results: <Not Defined>	
Partners: <Not Defined>	

Links / Sources for further information: <http://hdl.handle.net/10986/25102>

Project highlight 215

Title: El camino hacia una agricultura más inteligente



Author: Avianca revista	Subject: CSA
Publisher: Star Alliance	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> ● Participatory action research ● Successful communications ● Capacity enhancement ● Breakthrough science 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords:	Countries:
Highlight description: <Not Defined>	
Introduction / Objectives: <Not Defined>	
Results: <Not Defined>	
Partners: <Not Defined>	
Links / Sources for further information: http://www.aviancaenrevista.com/ediciones/edicion37.html	

Project highlight 217

Title: Con transferencia de tecnología apoyaran agricultores hondureños

Author: SAG

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Capacity enhancement
- Breakthrough science

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords:

Countries:

Highlight description: <Not Defined>

Introduction / Objectives: <Not Defined>

Results: <Not Defined>

Partners: <Not Defined>

Links / Sources for further information:

<http://www.sag.gob.hn/sala-de-prensa/noticias/ano-2016/enero-2016/con-transferencia-de-tecnologia-apoyaran-agricultores-hondurenos/>

Project highlight 218

Title: Los gremios colombianos entran a la era de los datos

Author: CIAT- FEDEARROZ - FENALCE - ASOHOFRUCOL

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Capacity enhancement
- Breakthrough science

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords:

Countries:

Highlight description: <Not Defined>

Introduction / Objectives: <Not Defined>

Results: <Not Defined>

Partners: <Not Defined>

Links / Sources for further information:

<http://blog.ciat.cgiar.org/es/los-gremios-colombianos-entran-a-la-era-de-los-datos/>

Project highlight 219

Title: Big data, the key for tomorrow's agriculture	
Author: CIAT	Subject:
Publisher:	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Breakthrough science 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords:	Countries:
Highlight description: <Not Defined>	
Introduction / Objectives: <Not Defined>	
Results: <Not Defined>	
Partners: <Not Defined>	
Links / Sources for further information: http://blog.ciat.cgiar.org/big-data-the-key-for-tomorrows-agriculture/	

Project highlight 220

Title: Big Data, el equipo que no descansa (CIMMYT, NICARAGUA –CSMS)	
Author: CIAT	Subject:
Publisher:	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Capacity enhancement • Breakthrough science • Inter-center collaboration 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords:	Countries:
Highlight description: <Not Defined>	
Introduction / Objectives: <Not Defined>	
Results: <Not Defined>	
Partners: <Not Defined>	
Links / Sources for further information: http://blog.ciat.cgiar.org/es/big-data-el-equipo-que-no-descansa/	

Project highlight 221

Title: Big Data for Climate Smart Agriculture in Kenya

Author: CIAT

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Breakthrough science

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords:

Countries:

Highlight description: <Not Defined>

Introduction / Objectives: <Not Defined>

Results: <Not Defined>

Partners: <Not Defined>

Links / Sources for further information:

<http://blog.ciat.cgiar.org/big-data-for-climate-smart-agriculture-in-kenya/>

Project highlight 222

Title: Big data roadshow in Uganda

Author: CIAT

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Breakthrough science

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords:

Countries:

Highlight description: <Not Defined>

Introduction / Objectives: <Not Defined>

Results: <Not Defined>

Partners: <Not Defined>

Links / Sources for further information: <http://blog.ciat.cgiar.org/big-data-roadshow-in-uganda/>

Project highlight 223

Title: Big Data Roadshow hits East Africa	
Author: CIAT	Subject:
Publisher:	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Capacity enhancement • Breakthrough science 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords:	Countries:
Highlight description: <Not Defined>	
Introduction / Objectives: <Not Defined>	
Results: <Not Defined>	
Partners: <Not Defined>	
Links / Sources for further information: http://blog.ciat.cgiar.org/big-data-roadshow-hits-east-africa/	

Project highlight 224

Title: CIMMYT participa en taller para análisis de grandes volúmenes de datos	
Author: CIMMYT	Subject:
Publisher:	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Capacity enhancement • Breakthrough science • Inter-center collaboration 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords:	Countries:
Highlight description: <Not Defined>	
Introduction / Objectives: <Not Defined>	
Results: <Not Defined>	
Partners: <Not Defined>	
Links / Sources for further information: http://conservacion.cimmyt.org/es/component/content/article/88-boletin-enlace-/2057-cimmyt-participa-en-taller-para-analisis-de-grandes-volumenes-de-datos	

6. Activities

A14 - 2. Pilot of a CSMS for rice in LAM (Colombia and Nicaragua)

Description: Refining, testing and validating of the best modelling approaches based on traditional statistical methods and /or empirical based on machine learning such as supervised and unsupervised learning in order to identify at least 10 CSA options in at least 4 countries; options to be disseminated by FLAR and its partners in each country, mainly Fedearroz, ANAR We (FL, RPL, PL) understand by system: (a) collecting both primary and secondary sources of information, its cleaning and management (b) making available the tools for collecting, managing, storing and analyzing information to end users, and also empower them and (c) Defining the best mechanisms to disseminate the CSA options

Start date: Jul 2015

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Jimenez, Daniel

<d.jimenez@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: For Colombia, 1,022 production events were collected in four rice-producing municipalities, in addition to the more than 32,000 records in 14 departments available for analysis. Climatic information of 45 meteorological stations (32 of IDEAM and 13 of Fedearroz), with daily data of the 5 main variables with incidence in the rice. For soils, a digital mapping of the department of Tolima was generated, obtaining 40 maps with detailed information of 22 physical-chemical factors. For Nicaragua there is a data base with about 600 productive events (Metadata Colombia and Nicaragua, deliverable D138). As a lesson learned from this information collection process, a protocol for data capture and processing was developed and discussed with FLAR, which can be used by the partner as a scaling strategy for other countries (Capture Protocol, deliverable D1079). Four analytical tools, with their guide and Scrip in R, are available for use (Links, deliverable D235).

Deliverables in this activity:

- D1078: Multi-temporal scale prediction of best CSA options
- D138: Databases with readily-available information on soils, crop management, climate and yield
- D235: Ready-to-use analytical tools (R scripts, guidelines) developed that can be implemented
- D1079: Data capture protocol for standardized climate, soil and management information at site-specific level

A16 - Identification of partners needs in terms of data and knowledge management Colombia, Peru y Nicaragua

Description: Documentation of partners needs and capacities on CSMS: Visits to each country/partner. FEDEARROZ (the national rice producers federation in Colombia), ?The Hacienda el Potrero? (Peru), and ANAR ?Asociaci?n Nicarag?ense de Arroceros? (Nicaragua) in order to know if and how they manage, share and store their information, how do they communicate with their farmers.

Start date: Jan 2015

End date: Jun 2016

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Jimenez, Daniel
<d.jimenez@cgiar.org>

Status: Complete

Overall activity or progress made during this cycle: <Not Defined>

Deliverables in this activity:

- D137: Report with a diagnosis of existing information of target CSP, and partners needs

A639 - 3. Dissemination of the new CSMS to technicians and farmers through FLAR's network

Description: Training of at least 70 technicians in at least in 8 countries (crops Chile, Argentina, Brazil, Colombia, Nicaragua, Argentina, Uruguay, and Mexico) and at least two other crops (Maize, and Beans). Training not only FLAR's partners but technicians from a wide range of institutions across LAM. In 2017 and 2018 it is expected reach at least 70. Remote support is given to the technicians trained when they report problems running the analysis. Writing of at least 40 blog posts and publication of at least 2 scientific papers in open access journals. Work closely with academic institutions to include CSMS as part of workshops for students in the near future and academic curriculum in the midterm. All these mechanism of dissemination are aimed at facilitating the adoption of the 10 CSA options

Start date: Aug 2017

End date: Dec 2018

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Jimenez, Daniel
<d.jimenez@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: For the capacities building, communication and dissemination strategy has been designed with five actions: a) generation of scientific papers in open access journals b) presentations and events of dissemination, FLAR talks and meetings, c) blog post, D) Workshops and short courses with professionals related to the production of rice, universities and other entities, e) coaching and mentoring. The first three have strengthened the knowledge in more than 5500 researchers, professionals and the public in general. And the last two have strengthened the skills in 56 researchers and professionals in rice data processing in four countries. The strategy with universities contributes to the social inclusion result of CCAFS, ensuring the participation of young people and women. It has achieved a 17% participation of women in the events, and about 60% of young people.

Deliverables in this activity:

- D236: Training of researchers, agronomists, and farmers on CSMS through existing FLAR's network

7. Leverages

No leverages added

Title: Gender and Social Inclusion

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2022	PMU	Huyer, Sophia <S.Huyer@CGIAR.ORG>

Funding source types	Status	Lead Organization	Project leader
W1/W2	Complete	CIAT - Centro Internacional de Agricultura Tropical - Colombia	Huyer, Sophia <S.Huyer@CGIAR.ORG>

Project is working on

Flaship(s)
F1 (before F4 - Philip): Priorities and Policies for CSA
F2 (before F1 - Andy): Climate-Smart Technologies and Practices
F3 (Lini): Low emissions development
F4 (before F2 - James): Climate services and safety nets

Region(s)
EA: East Africa
LAM: Latin America
SAs: South Asia
WA: West Africa

Project summary

This activity will support research, policy engagement and capacity enhancement across CCAFS on gender and other forms of social inequality, including class, age, race, ethnicity and occupation. CCAFS will address gender and social inclusion in all its Flagships. Gender and other inequalities undermine innovation and food security, and women and marginalised individuals and households are often more vulnerable to climate change. CCAFS will embrace strategies to reach women farmers in male-headed households, asset-poor female-headed households, youth in agriculture, and those marginalised on the basis of their livelihood activities, age, ethnicity, class or other factors. Adaptation and mitigation actions that benefit women and other social groups will be identified. The overall aim of the CCAFS gender strategy is to contribute to the gender and youth sub-IDs (Increased control by women and youth of assets and resources, increased participation in decision-making, technology which decreases the labour burden of women and youth).

2. Partners

Partner #1 (Leader)

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Coordinate gender and social inclusion research across CCAFS; implement, update and report on the CCAFS gender strategy; implement strategic and applied research activities related to GSI; provide technical assistance to collaborators and partners on GSI into R&D programs; build equality partnerships with institutions working on GSI; participate in planning and review of activities and priorities within CCAFS; support the application and monitoring of GSI indicators for CCAFS outcomes	HQ
Project Coordinator	Nyasimi, Mary <m.nyasimi@cgiar.org>	Coordinate GSI projects and activities; manage activity and budget planning and reporting; execute contracts and liaise with research partners for delivery of outputs; coordinate and oversee GSI communications within CCAFS, with partners and beyond; provide grant support, fund-raising and liaison support with partners; support themes/regions with GSI mainstreaming and technical and research support.	HQ

Partner #2

Institution: KU - Københavns Universitet

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Vermeulen, Sonja <s.vermeulen@cgiar.org>	Activity 2014-377 *Leader*. Activity 2014-378 *Leader*.	HQ

Partner #3

Institution: IFPRI - International Food Policy Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Ringler, Claudia <C.RINGLER@CGIAR.ORG>	Activity 2014-437 *Leader*. Study and outcome on gender approaches in development agencies	HQ

Partner #4

Institution: ICRAF - World Agroforestry Centre

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Jost, Christine <c.jost@cgiar.org>	Activity 2014-439 *Leader*. Responsible for all activities under one of the activities	HQ

Partner #5

Institution: CARE

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Robinson, Dorcas <d Robinson@careclimatechange.org>	Will contribute to ongoing discussions on conceptualization and good practices of gender in the context of climate change, agriculture, and food security.	Merrifield, Virginia, United States

Partner #6

Institution: FAO - Food and Agriculture Organization of the United Nations

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Nelson, Sibyl <sibyln@yahoo.com>	Contributing to joint development of a practice brief.	HQ

Partner #7

Institution: The World Bank-United States

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Pehu, Eija <epehu@worldbank.org>	Collaborate with CCAFS on capacity development in gender and social inclusion for scaling up CSA Collaborate on methodologies, processes and approaches to include gender equity and equality in development of mechanisms and tools to facilitate the operationalization of CSA	HQ

Partner #8

Institution: IFAD - International Fund for Agricultural Development

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Bishop-Sambrook, Clare <c.bishopsambrook@ifad.org>	Collaboration on analysis of HH methodologies and their potential for improving women's participation in decision making at household levels, as well as scaling up CSA.	HQ

Partner #9

Institution: WISAT - Women in Global Science and Technology

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Hafkin, Nancy <nhafkin@wisat.org>	Collaboration on National Assessments on Gender and STI; provision of expertise on selected topics and products	HQ

Partner #10

Institution: CIMMYT - Centro Internacional de Mejoramiento de Maíz y Trigo

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Stirling, Clare <c.stirling@cgiar.org>	To undertake HHM survey together with CSA interventions developed by CIMMYT and partners to form Climate Smart Innovation Methodology Models which can be scaled up and out. Work will begin in Malawi	HQ

Partner #11

Institution: UNIQUE - Unique Forestry and Land Use GmbH

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Tennigkeit, Timm <timm.tennigkeit@unique-landuse.de>	To conduct research on integrating gender and social inclusion into the dairy NAMA in Kenya	HQ

Partner #12

Institution: AWGGCC - African Working Group on Gender and Climate Change

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Nyasimi, Mary <m.nyasimi@cgiar.org>	To oversee UNFCCC engagement for AWGGCC and ensure gender and climate change submission are done for Africa	HQ

Partner #13

Institution: CATIE - Centro Agronómico Tropical de Investigación y Enseñanza

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Gutierrez-Montes, Isabel <isabel.gutierrez@catie.ac.cr>	To oversee the construction of a framework for improved gender integration into Climate-Smart Agriculture project design, implementation and evaluation.	HQ

Lessons regarding your partnerships and possible implications for the coming planning cycle:

Year	Lesson(s)
2016	Sharing of gender research through the GenderCC group has not been as effective. One reason might be the few researchers across the CGIAR centers and CRPs. In 2017, GSI will work closely with CGIAR gender platform for more engagement

Partnerships overall over the last reporting period:

GSI collaborated with its partners to ensure that 2016 outcomes were achieved. The diverse partners provided an excellent gender resource base (experts) that were committed to achieving GSI objectives. Research projects were initiated and publications of GSI findings were in various blogs, journal papers, UNFCCC submission, practice and policy briefs and newsletters. The GenderCC google groups provided a platform for CGIAR and CRP researchers to share GSI related research activities

3. Locations

This project is global

Project level	Latitude	Longitude	Name
Country			Malawi

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:

GSI will connect up, provide support to, and synthesize research across Flagships and regions and identify broad patterns particularly in relation to women's and youth access to and control over resources, participation of women and youth in decision-making at different levels and the impact on CC adaptation and mitigation efforts. GSI will broaden its work on household decision-making and the impacts on household and community level efforts. GSI will also produce high-quality research related to gender trends, situation and opportunities in CSA, and gender and social inclusion in climate finance and global policy processes with a view to strengthening policies and related processes at national, sub-national and international levels. The Gender and CCAFS Climate Change Network will contribute to technical support and research on gender and social inclusion across Flagships and Regions.

Annual progress towards outcome (end of 2016*): The GSI Strategy and CCAFS Gender and CC network will be launched; pilot testing of the W+ standard will be completed; further analysis of Gender HH Survey will provide a baseline against which impact can be measured along with other CSA impact measurement methods; HH methodologies will be tested in relevant projects; tools will be made available on the CCAFS website to support projects and partners; research will be inputted in global policy opportunities.

Annual progress towards project outcome in the current reporting cycle (2016*): The GenderCC network was launched with 63 members. GSI took part in the drafting of the UNFCCC submission and used GSI products to draft SBI-UNFCCC submissions. Gender research tools were uploaded on CCAFS websites and Dropbox. HHM survey was initiated in Malawi. A workshop was held to develop the Gender and CSA framework. Side event was held at COP22 in partnership with CARE, AfDB and IFAD GSI co-edited special issue of Gender in Agriculture Partnership's newsletter The July 2016 special issue of Gender, Technology and Development 2 Working papers on Dairy NAMA in Kenya were published Two National assessments on gender were conducted in Nepal and Senegal

How communication and engagement activities have contributed to achieving your Project outcomes:* Several blogs were published before and after GSI events GSI twitter (@CCAFS_GSI) and Facebook (<https://www.facebook.com/GSIUnit/>) were launched Several journal papers were published and blogs, twitter, Facebook were used to publicize GSI participated in the CGIAR Q&A Twitter Chat was done and blog written to celebrate the International Day of Rural Women

Evidence documents of progress towards outcomes:*

<https://marlo.cgiar.org/data/ccafs/projects/125/projectOutcome/GSI%20Communications%20%20Report%202016.doc>

Annual progress towards outcome (end of 2015):

Annual progress towards outcome (end of 2017): The CCAFS Gender and CC network will have strengthened capacity to support projects across CCAFS on GSI-related research; impact assessment methodologies will be adapted and shared with CCAFS projects; gender research will be integrated in regional impact pathways; gender analysis in design, implementation, and monitoring of results, including ex ante and ex poste analysis will be developed and tested across the programme. Products and inputs will be developed to promote gender equality in relevant global policy.

Annual progress towards outcome (end of 2018):

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* <Not Defined>

4.2 CCAFS Outcomes

F1 (before F4 - Philip) Outcome 2019: National/sub-national jurisdictions enact equitable food system policies and increase institutional investment that take into consideration climate smart practices/strategies, better articulated among themselves and in collaboration with private sector, civil society and researchers informed by CCAFS decision support tools

Indicator #1: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

2019
<p>Target value: <Not Defined></p> <p>Cumulative target to date: 4</p> <p>Target narrative: <Not Defined></p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>
2015
<p>Target value: 2</p> <p>Cumulative target to date: 2</p> <p>Target narrative: <Not Defined></p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2016

Target value: 2

Cumulative target to date: 4

Target achieved: 6.0

Target narrative: CCAFS CSA efforts are integrating GSI approaches and sharing lessons learned from CSVs with other jurisdictions including through media and international policy forums. Good practices and lessons learned are informing institutional investment, e.g. capacity strengthening, shifts in institutional culture, institutional knowledge and approaches etc.

Narrative for your achieved targets, including evidence: 6 UNFCCC submissions on gender and climate change were made by various countries and the African Group of Negotiators (AGN) to SBI 44 and SBI 45

<http://www4.unfccc.int/submissions/SitePages/sessions.aspx?showOnlyCurrentCalls=1&populateData=1&expectedsubmissionfrom=Parties&focalBodies=SBI> Website link:

<http://www4.unfccc.int/submissions/SitePages/sessions.aspx?showOnlyCurrentCalls=1&populateData=1&expectedsubmissionfrom=Parties&focalBodies=SBI>

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS

outcome: a) 4 submissions by Kenya, Uganda, Nigeria and the AWGGCC (through the chair of AGN-Mali) made submissions to SBI 45. b) 2 submission by Kenya and Uganda made submissions to SBI 44 on gender and climate change

The expected annual gender and social inclusion contribution to this CCAFS outcome: GSI focuses 100% on gender and social inclusion.

2017

Target value: 0

Cumulative target to date: 4

Target narrative: <Not Defined>

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

Major Output groups:

- F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

F1 (before F4 - Philip) Outcome 2019: Appropriately directed institutional investment of regional/global organisations and processes (e.g. IFAD, WB, FAO, UNFCCC) based on national/regional engagement to learn about local climate smart food system priorities

Indicator #1: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

2019
<p>Target value: <Not Defined></p> <p>Cumulative target to date: 8</p> <p>Target narrative: <Not Defined></p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>
2015
<p>Target value: 4</p> <p>Cumulative target to date: 4</p> <p>Target narrative: <Not Defined></p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2016

Target value: 4

Cumulative target to date: 8

Target achieved: 6.0

Target narrative: - IFAD, FAO, WB, and UNFCCC will benefit from research findings, good practices, and lessons learned on GSI integration in CSA and climate smart food systems approaches as well as lessons learned. - Will support strategic investments such as, e.g. capacity strengthening, institutional change and learning, human resource shift to consider GSI in relation to climate smart food systems.

Narrative for your achieved targets, including evidence: The following partners were involved with GSI on various research activities and products - FAO - World Bank - UNFCCC SBSTA and SBI - IFAD - CARE - African Group of Negotiators (AGN) and African Working Group on Gender and Climate Change (AWGGCC)

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS

outcome: - GSI, WB and FAO published a practice brief on 'A Gender-responsive Approach to Climate-Smart Agriculture Evidence and guidance for practitioners' - AWGGCC and AGN used Infonote (Huyer, 2016) to develop the UNFCCC SBI submission on Lima work program on Gender - SBI - GSI, IFAD and CARE published a blog after COP22 side event "Building Women's Resilience to Climate Change: Lessons from Smallholder Farmers. - 2 infonote (measures for climate change adaptation in agriculture & climate change adaptation in agriculture: practices and technologies) developed and used by AGN to draft African position on Agriculture for UNFCCC SBSTA 44 workshop

The expected annual gender and social inclusion contribution to this CCAFS outcome: GSI is 100% focused on gender and social inclusion.

2017

Target value: 0

Cumulative target to date: 8

Target narrative: <Not Defined>

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

Major Output groups:

- F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

F2 (before F1 - Andy) Outcome 2019: National and subnational development initiatives and public institutions prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools.

Indicator #1: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019
<p>Target value: 0</p> <p>Cumulative target to date: 8</p> <p>Target narrative: <Not Defined></p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>
2015
<p>Target value: 2</p> <p>Cumulative target to date: 2</p> <p>Target narrative: <Not Defined></p> <p>The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined></p>

2016

Target value: 6

Cumulative target to date: 8

Target achieved: 6.0

Target narrative: 2 initiatives incorporating GSI (e.g. testing HH methodologies) will be shared with national and subnational development initiatives and lessons learned shared with CSA networks, across CCAFS regions and at the global level. 4 international agencies will continue to use CCAFS GSI tools – Toolbox, case studies, new approaches and tools arising from a gendered HH approach and building from evidence from Gender HH survey (e.g. FAO, CARE, IFAD, World Bank). A pillar on GSI will be developed for the CSA compendium. Gender-sensitive CSA approaches will also be shared through the CCAFS website, social media, journal articles, meetings and international fora.

Narrative for your achieved targets, including evidence: - HH surveys initiated in Nepal - Policy brief, practice brief on CSA published - Workshop held to develop gender and CSA action framework - GSI Twitter, LinkedIn, Facebook launched and active

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS

outcome: GSI strategy was published and shared widely. Gender sensitive CSA approachers were shared during COP22, CCAFS websites and through publication of a special issue journal and working papers, and various social including including Twitter and Facebook. National Assessment on Gender, Science Technology and innovation is ongoing in Nepal and Senegal. Testing of HH methodologies is continuing

The expected annual gender and social inclusion contribution to this CCAFS outcome: GSI focuses 100% on gender and social inclusion

2017

Target value: 0

Cumulative target to date: 8

Target narrative: <Not Defined>

The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

Major Output groups:

- F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)
- F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)
- F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:

GSI contributes across Flagships and Regions so it will work across a number of Impact Pathways. This work will build on the GSI Strategy in development, and the regional impact pathways. It will support synthesis and comparison of results, methodologies and lessons learned across Regions and Flagships.

Collaborating with other CRPs

<This project does not have a CRP selected yet.>

4.4 Case Studies

Case Study #87

Title: Gender and Social Inclusion in CCAFS

Year: 2016

Project(s): P125

Outcome Statement: GSI worked partners towards supporting gender research and policy engagement across CCAFS to ensure that reporting on gender and social inclusion was done. GSI also worked with African Working Group on Gender and Climate Change (AWGGCC) to ensure GSI results were included in the COP22 gender decision. Within the INDCs, 64 Non-Annex I countries made a reference to women or gender.

Research Outputs: Nelson, S & Huyer, S. 2016. A Gender-responsive Approach to Climate-Smart Agriculture. Practice Brief Huyer, S. 2016 gender and international climate policy: An analysis of progress in gender equality at COP21. Infonote Huyer, S. 2016. Closing the Gender Gap in Agriculture. GTD 20(2) 105–116 Cramer et al. 2016. Connecting Women, Connecting Men: GTD 20(2) 169–199 Gumucio et al. CCAFS WP 159. McKinley J et al. 2016. Gender Differences in Climate Change Perception and Adaptation Strategies: The Case of Three Provinces in Vietnam's Mekong River Delta, CCAFS Report Bryan et al. 2016. Integrating Gender into Climate Change Adaptation Programs: A Research and Capacity Needs Assessment for SSA. CCAFS WP163. Huyer et al. 2016 CCAFS GSI Strategy. CCAFS WP 171. Kristjanson et al. (2016) Addressing gender in agricultural research for development in the face of a changing climate: Where are we and where should we be going? submitted to IJAS

Research Partners: CARE International Women in Sciences and Technology (WISAT) IRRI CIMMYT UNIQUE forestry and land use GmbH

Activities: Side event at COP 22 in Marrakech in partnership with CARE and IFAD Participated in International Day of Rural Women through CGIAR Q&A Twitter Chat & published research highlight titled "CCAFS highlight shows technology helps women in celebration of the International Day of Rural Women". Workshop for CCAFS staff from FPs and Regions and partners on Implementing Gender and CSA workshop Workshop for AWGGCC and AGN members to draft the Lima Work Programme on Gender Submission to UNFCCC. 2-day Gender Training and Sensitizing Workshop for Kenya's County Government policy makers Published several blogs/briefs including "Gender and international climate policy An analysis of progress in gender equality at COP21"; Training materials on 'Caja de herramientas para género e inclusión Investigación participativa en cambio climático y agricultura".

Non-Research Partneres: African working Group in Gender and Climate Change (AWGGCC) African Group of Negotiators (AGN) produced a UNFCCC SBI submission National governments in EA and WA FIDA - Kenya National Gender and Equality Commission - Kenya Africa Women Empowerment - Nigeria

Output Users: African working Group in Gender and Climate Change (AWGGCC) African Group of Negotiators (AGN) National Governments in East and West Africa Researchers at CCAFS and other CGIARS center and CRPs

Evidence Outcome: Gender decision (-/CP.22) was reached during COP22 in Marrakech. 64 of the INDCs mention gender. Several journal papers were published that used sex disaggregated data indicators.

Output Used: 1. Outputs were used by parties and observers at national and continental level to the UNFCCC, and informed their perspectives on how gender and social inclusion 2. Training and capacity building of policy makers

References Case: AGN and Kenya SBI submission on Lima Work Program on gender to the UNFCCC Nyasimi et al. Africa advancing and augmenting the UNFCCC Lima Work Programme on Gender Huyer, S. and Nyasimi. 2016. GAP Update: Gender and Climate Change.

Primary 2019 outcome indicator(s):

- # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools
- # of low emissions plans developed that have significant mitigation potential for 2025, i.e. will contribute to at least 5% GHG reduction or reach at least 10,000 farmers, including at least 10% women.
- # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

Link between outcome story and and the FP Outcome(s): <Not Defined>

Annex uploaded:

Case Study #97

Title: Analysis of Paris Agreement pledges informs development planning and UNFCCC negotiations

Year: 2016

Project(s): P91

Outcome Statement: In November 2015, CCAFS published the first analysis of countries' Intended Nationally Determined Contributions to the Paris Climate Agreement. This research shaped subsequent planning among development organizations by demonstrating a country-driven demand for mitigation of agricultural emissions. Donors (World Bank and USAID) and impact investors (Root Capital) incorporated the analysis into their debates and strategies for low-emissions development assistance. Country negotiators used it to demonstrate the linkages between adaptation and mitigation in the agriculture sector.

Research Outputs: 1. Maps of agriculture in INDCs (D2663) 2. Data set (excel) on agriculture in INDCs (D2663) 3. Web page in CCAFS "tools" collection on agriculture in the INDCs 4. Info note: Agriculture's prominence in the INDCs (D1623) 5. Info note: How countries plan to address agricultural adaptation and mitigation (D1624) 6. Info note: Agriculture's contribution to national emissions (D1622) 7. Press release: Majority of national climate plans address agriculture, but most lack funds for footing annual USD 5 billion bill 8. Presentation at SBSTA side event (D1410, D2684) 9. Presentation at CCAFS Agriculture Negotiators Workshop (D2871) 10. Presentation at USAID Global Learning and Evidence Exchange workshop, Zambia March 15, 2016

Research Partners: This research was conducted primarily by CCAFS, with contributions from Flagship 1 (Priorities and Policies), Gender and Social Inclusion, the Coordinating Unit, and Copenhagen University. Ongoing partnerships with organizations such as World Bank, USAID, Root Capital, and country negotiators (especially Costa Rica, Vietnam, and Colombia) contributed to strong demand for the research products. FAO hosted a CCAFS workshop for COP22 agriculture negotiators.

Activities: FP3 collaborated with the CU on a press release and media campaign, capitalizing on discussion of INDCs at COP21. Lini Wollenberg and Meryl Richards gave media interviews and presented the results of the analysis at (1) an FP3-led SBSTA 44 side event, (2) a CCAFS global meeting for agriculture negotiators before COP22, (3) a USAID Global Learning and Evidence Exchange workshop. Upon request from individuals at World Bank, FP3 provided the database and carried out specific analyses (e.g. specific countries that included livestock mitigation). World Bank circulated key messages among staff of their Global Solutions Group on Climate Smart Agriculture and Global Practice for Agriculture. CCAFS also contributed analysis and text to the World Bank discussion paper, "Making climate finance work in agriculture." By request, FP3 presented the NDC analysis to USAID staff in two workshops and to UNFCCC country negotiators in a pre COP22 preparation workshop.

Non-Research Partneres: World Bank USAID Root Capital

Output Users: World Bank USAID Root Capital COP22 agriculture negotiators

Evidence Outcome: The outputs are referenced in a World Bank Discussion paper: <http://documents.worldbank.org/curated/en/986961467721999165/Making-climate-finance-work-in-agriculture> Also, see full documentation in attached annex

Output Used: 1. Prepare briefing notes for 2016 WB Spring Meetings 2. Inform WB's Climate Change Action Plan 3. Design agriculture project components (WB) 4. Guide USAID planning of LED 5. Determine implications of INDCs for smallholder agricultural finance (Root Capital) 6. Demonstrate the linkages between adaptation and mitigation (COP22 ag negotiators)

References Case: Press release:

<https://ccafs.cgiar.org/news/media-centre/press-releases/report-majority-national-climate-plans-address-agriculture-most#.WKHOKhIrJ0c> World Bank study:

<http://documents.worldbank.org/curated/en/986961467721999165/Making-climate-finance-work-in-agriculture> Entry on CCAFS "tools" page:

<https://ccafs.cgiar.org/agricultures-prominence-indcs-data-and-maps#.WKHN0xIrJ0d> Maps and data: <http://hdl.handle.net/10568/73255>

Primary 2019 outcome indicator(s):

- # of low emissions plans developed that have significant mitigation potential for 2025, i.e. will contribute to at least 5% GHG reduction or reach at least 10,000 farmers, including at least 10% women.

Link between outcome story and and the FP Outcome(s): The analysis provided evidence that developing countries consider agriculture a priority for climate adaptation and mitigation; donors are using the analysis to guide their funding priorities.

Annex uploaded:

<https://marlo.cgiar.org/data/ccafs/projects//111/caseStudy/P111%20outcome%20case%20study%20statements%20from%20research%20users.pdf>

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: <Not Defined>

Brief 2019 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Major Output groups - 2016

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: - Incorporate HH Decision-making approaches into CSA for more equitable household and community decision-making and CSA benefits - Share case studies on innovative, gender-sensitive CSA practices and approaches through various fora at different levels and in different media (relevant to users). -Work with flagships to synthesize learning and methodologies

Brief summary of your actual 2016 contribution towards the selected MOG: - Workshop held to develop the gender and CSA action framework - Case studies initiated in EA, WA, LAM, SA on document gender sensitive CSA practices - Continued disseminating gender research, tools on the GenderCC Network - COP22 side event on Building Women's Resilience to CC: Lessons from Smallholder Farmers

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: 100% of GSI work is focused on gender and social inclusion.

Summary of the gender and social inclusion dimension of the 2016 outputs: All of GSI's work focuses on integrated and strategic research on gender and social inclusion (women and youth).

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: - Pilot testing of W+ certification - Development of knowledge products that strengthen supra-national governance systems and equitable engagement mechanisms. - Work with Global Gender and Climate Alliance to highlight gender issues in CC advocacy - Inputs to IFAD, FAO, World Bank and UNFCCC

Brief summary of your actual 2016 contribution towards the selected MOG: - PRACTICE BRIEF Climate-smart agriculture that provides evidence for policy makers - Analysis of progress in gender equality at COP21 - Contribution to 2 infonote for the 2 SBSTA 44 workshops - Contributed to elements of Lima Work Program on Gender (LWPG). - Side event held at COP22

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: 100% of GSI work is focused on gender and social inclusion.

Summary of the gender and social inclusion dimension of the 2016 outputs: All of GSI's work focuses on integrated and strategic research on gender and social inclusion (women and youth)

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: - Pilot study in two regions of the W+ certification scheme (Nepal and country TBD) - Collaboration on analysis and/or case study of the gender results in CSVs, as well as local and regional collaborations for policy, financing and social change - National Assessments national studies analyses and results disseminated.

Brief summary of your actual 2016 contribution towards the selected MOG: - National assessment studies in Nepal and Senegal - Study on Youth Decision Making in Agricultural CC in Kenya - Workshop held and review report on Gender, dairy development and biogas promotion and use in Kenya - Policy brief (Huyer 2016) - WP163 Integrating Gender into Climate Change Adaptation Programs

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: 100% of GSI work is focused on gender and social inclusion.

Summary of the gender and social inclusion dimension of the 2016 outputs: All of GSI's work focuses on integrated and strategic research on gender and social inclusion (women and youth).

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: - Analysis of HH methodologies and their potential for improving women's participation in decision making at household levels, -Scaling up CSA to meet the needs of women and youth farmers and enhance adaptive capacity, food security and social equality

Brief summary of your actual 2016 contribution towards the selected MOG: - GSI strategy published (Huyer et al) - 6 Articles published in special issue of GTD - Household surveys initiated in Malawi - Co-edited a special issue of the GAP newsletter - Social media engagement on International day of rural women - 21 Blogs, 3 news updates on GSI

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: GSI is focused 100% on gender and social inclusion.

Summary of the gender and social inclusion dimension of the 2016 outputs: All of GSI's work focuses on integrated and strategic research on gender and social inclusion (women and youth).

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: - Development of Gender pillar in CSA compendium of best practices

Brief summary of your actual 2016 contribution towards the selected MOG: - Workshop held to develop the Gender and CSA framework - Guide to Best Practices for Gender and Socially Inclusive Development in the Kenyan Intensive-Dairy Sector developed - 2 Working paper and journal (not published yet) by the Dairy NAMA project in Kenya

Brief 2016 plan of the gender and social inclusion dimension of the expected annual output: GSI is focused 100% on gender and social inclusion.

Summary of the gender and social inclusion dimension of the 2016 outputs: All of GSI's work focuses on integrated and strategic research on gender and social inclusion (women and youth).

Major Output groups - 2015

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: Gender and CC Network was established to promote collaborative research and programs; sharing of methods, tools, and approaches; and exchange of experience on project design, proposal writing, and implementation among researchers in the CGIAR. Learning event: Seminar on Closing the Gender Gap in Climate Change, Paris, March 2015

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: All of GSI's work focuses on GSI - integrated and strategic research.

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: - Strengthened gender/youth aspects - Guide to UNFCCC Negotiations on Agriculture Toolkit (Farming First 2015). - Gender Panel - GLF High Level Event, "From farmers' fields to landscapes: Food security in a new climate regime?" - Analysis of GSI in the INDCs for COP21 (Richards et al, 2015)

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: All of GSI's work focuses on GSI - integrated and strategic research.

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: - GSI policy briefs (Huyer et al 2015, Vermeulen, 2015). - Gender/youth in Guide to UNFCCC Negotiations on Agriculture Toolkit (Farming First 2015). - Gender analysis in INDCs for COP21 - Gender Panel - GLF High Level Event "From farmers' fields to landscapes: Food security in a new climate regime?"

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: All of GSI's work focuses on GSI - integrated and strategic research.

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: CCAFS Policy brief 10: Supporting women farmers in a changing climate: five policy lessons (Huyer et al, 2015), summarizes recent CCAFS GSI research on gender and CSA practices and technologies, climate services, innovation, and institutions.

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: All of GSI's work focuses on GSI - integrated and strategic research.

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2015 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2015 contribution towards the selected MOG: - Contributed to WB/FAO/IFAD CSA Module 18, Gender and Agriculture Sourcebook. - Contributed to development of CSA101 website to be launched 2016. - Gender and Inclusion Toolbox downloading (one of top resources on CCAFS site)

Brief 2015 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2015 outputs: All of GSI's work focuses on GSI - integrated and strategic research.

Major Output groups - 2014

F1 (before F4 - Philip): Improved national planning processes through policy analyses, (re)formulation and implementation; and stakeholder analyses and engagement through scenarios, learning alliances and science-policy dialogues

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

F1 (before F4 - Philip): Effective supra-national governance systems and equitable engagement mechanisms between international and regional/national stakeholders to influence global policy and strengthened capacities to integrate local priorities into global fora

Brief bullet points of your expected annual 2014 contribution towards the selected MOG: <Not Defined>

Brief summary of your actual 2014 contribution towards the selected MOG: <Not Defined>

Brief 2014 plan of the gender and social inclusion dimension of the expected annual output: <Not Defined>

Summary of the gender and social inclusion dimension of the 2014 outputs: <Not Defined>

5.2 Deliverables

D2850 - Presentation: Climate Change, Gender and Agriculture: The CCAFS Approach

Main Information

Type: Reports and other publications

Subtype: Conference paper / Seminar paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate Change, Gender and Agriculture: The CCAFS Approach

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-05-26

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Huyer - Sophia

Deliverable Quality check

FAIR Compliant: F A I R

Deliverable Data sharing

Deliverable files:

https://marlo.cgiar.org/data/ccafs/projects//125/deliverableDataSharing/Huyer_GSI_Bioversity_2016-5

[-26.pdf](#)

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D2532 - Gender in Agriculture Partnership

Main Information

Type: Outreach products

Subtype: Newsletter

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<http://www.gender-gap.net/content/gap-update-gender-and-climate-change>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: GAP Special Issue: ?How can countries deliver to national commitments on gender and climate change?

Description / Abstract: . The GAP Update: Gender and Climate Change highlighted the importance of accounting for gender in the fight against climate change. The update specially looked at gender and climate change policy in Africa and Latin America.

Publication / Creation date: <Not Defined>

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <http://www.gender-gap.net/content/gap-update-gender-and-climate-change>

DOI: <Not Defined>

Creator / Authors:

- Huyer - Sophia
- Nyasimi - Mary

Partners contributing to this deliverable:

Institution	Partner	Type

CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Nyasimi, Mary<m.nyasimi@cgiar.org>	Other

D2724 - CCAFS Gender and Social Inclusion Strategy

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/72900>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: CCAFS Gender and Social Inclusion Strategy

Description / Abstract: The CCAFS Gender and Social Inclusion (GSI) Strategy is an update of the CCAFS 2012 Gender Strategy. The new strategy addresses gender as well as social inclusion for different social groups while bearing in mind that women are central to agriculture in developing countries. The CCAFS approach to GSI allies with the CGIAR objectives to create opportunities for women, young people and marginalized groups and to promote equitable access to resources, information and power in the agri-food system for men and women in order to close the gender gap by 2030.

Publication / Creation date: 2016-04-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY, GENDER, SOCIAL INCLUSION, CLIMATE-SMART AGRICULTURE, AGRICULTURAL PRACTICES, ADAPTATION TECHNOLOGIES, RESILIENCE

Citation: Huyer S, Campbell BM, Hill C, Vermeulen S. 2016. CCAFS Gender and Social Inclusion Strategy. Working Paper no. 171. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/72900>

DOI: <Not Defined>

Creator / Authors:

- Huyer, - Sophia
- Campbell, - Bruce Morgan
- Hill, - Catherine
- Vermeulen, - Sonja

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D1447 - Special journal issue on Supporting Women Farmers in a Changing Climate

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/78453>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Closing the gender gap in agriculture

Description / Abstract: Agriculture is the largest employment sector for 60% of women in Oceania, Southern Asia and sub-Saharan Africa and women make up 2/3 of the world's 600 million small livestock managers. Despite this, women's activities in agriculture are characterised by a global gender gap in vulnerabilities, access to resources, and productivity. As a result of these differences, women and men farmers in developing countries have different abilities to adapt to climate change. But addressing gender inequalities in agriculture to address climate change involves more than erasing inequities in access to resources. The question of whether women have control of these resources; whether they participate in use of and decisions around the accrued benefits of increased production and income, and whether resources meet their requirements and priorities, will all determine whether the gender gap in agriculture is closed. It also involves ensuring that women's needs and priorities are met, in terms of how priorities are set, modes of support and resources. Technologies to support resilience and adaptation to climate change by smallholder farmers can promote women's empowerment and the transformation of gender relations in addition to sustainably increasing agricultural production. But this will only happen if they are implemented in a framework of mutually reinforcing resources, women's control of assets, equitable decisionmaking between women and men, and strengthened capacity.

Publication / Creation date: 2016-06-01

Language: English

Country: <Not Defined>

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Huyer, S. 2016. Closing the Gender Gap in Agriculture. Gender, Technology and Development 20(2): 105-116. DOI: 10.1177/0971852416643872.

Handle: <http://hdl.handle.net/10568/78453>

DOI: <https://dx.doi.org/10.1177/0971852416643872>

Creator / Authors:

- Huyer - Sophia

Publication Metadata

Volume: 20

Issue: 2

Pages: 105-116

Journal/Publisher name: Gender Technology and Development

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledged: Yes

Flagships contribution: • CCAFS - F3 (LINI)

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D2536 - Identifying elements for the Lima Work Program on Gender

Main Information

Type: Outreach products

Subtype: Article for media/Magazine/Other (not peer-reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<http://www4.unfccc.int/submissions/SitePages/sessions.aspx?showOnlyCurrentCalls=1&populateData=1&expectedsubmissionfrom=Parties&focalBodies=SBI>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Submission by the Republic of Mali on behalf of the African Group of Negotiators (AGN) on the Continuation and Enhancement of the Lima Work Programme on Gender

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-11-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: Submission by the Republic of Mali on behalf of the African Group of Negotiators (AGN) on the Continuation and Enhancement of the Lima Work Programme on Gender

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Nyasimi, Mary <m.nyasimi@cgiar.org>	Responsible



D2538 - Closing the Gender Gap in Agriculture

Main Information

Type: Articles and Books

Subtype: Journal Article (peer reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<https://cgspace.cgiar.org/handle/10568/78453>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Closing the Gender Gap in Agriculture

Description / Abstract: Agriculture is the largest employment sector for 60% of women in Oceania, Southern Asia and sub-Saharan Africa and women make up 2/3 of the world's 600 million small livestock managers. Despite this, women's activities in agriculture are characterised by a global gender gap in vulnerabilities, access to resources, and productivity. As a result of these differences, women and men farmers in developing countries have different abilities to adapt to climate change. But addressing gender inequalities in agriculture to address climate change involves more than erasing inequities in access to resources. The question of whether women have control of these resources; whether they participate in use of and decisions around the accrued benefits of increased production and income, and whether resources meet their requirements and priorities, will all determine whether the gender gap in agriculture is closed. It also involves ensuring that women's needs and priorities are met, in terms of how priorities are set, modes of support and resources. Technologies to support resilience and adaptation to climate change by smallholder farmers can promote women's empowerment and the transformation of gender relations in addition to sustainably increasing agricultural production. But this will only happen if they are implemented in a framework of mutually reinforcing resources, women's control of assets, equitable decisionmaking between women and men, and strengthened capacity.

Publication / Creation date: 2016-12-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE,AGRICULTURE,FOOD SECURITY

Citation: Huyer S. 2016. Closing the gender gap in agriculture. Gender, Technology and Development 20(2):105–116.

Handle: <http://hdl.handle.net/10568/78453>

DOI: <https://dx.doi.org/10.1177/0971852416643872>

Creator / Authors:

- Huyer S, -

Publication Metadata

Volume: 20

Issue: 2

Pages: 12

Journal/Publisher name: Gender technology and Development

Indicators for journal articles: • This journal article is an ISI publication

Publication acknowledge: Yes

Flagships contribution:

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D1450 - Integrating Gender in Mechanisms and Tools to Facilitate the Operationalization of CSA

Main Information

Type: Data, models and tools

Subtype: Data portal/Tool/Model code/Computer software

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: <https://csa.guide/>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate Smart Agriculture 101

Description / Abstract: The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and partners developed a website presenting the climate-smart agriculture (CSA) approach to food security and sustainable development. The website aims to help practitioners, researchers and decision-makers working with or interested in CSA. The site helps you get started and guide you on the ground, connecting you with all the resources you need to dig deeper. For countries following up on their commitments under the Paris Agreement, CSA Guide is a useful tool to set up mitigation and adaptation initiatives in agriculture.

Publication / Creation date: 2016-04-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Cooper - Peter
- Thorton - Phillip
- Hansen - James
- Beare - Dough

- Braun - Melody
- Vervoort - Joost
- Funder - Mikkell
- Rasmussen - Julie Fogt
- Leete - Matthew
- Huyer - Sophia
- Hill - Catherine
- Rosenstock - Todd
- Girvetz - Evan
- Corner-Dolloff - Caitlin
- Millan - Alberto
- Vasileiou - Ioannis
- Baedeker - Tobias
- Westermann - Olaf
- Dinesh - Dhanush
- Vermuelen - Sonja
- Campbell - Bruce

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Nyasimi, Mary<m.nyasimi@cgiar.org>	Other

D2539 - National Assessment on Gender Equality in the Knowledge Society in Nepal

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Analysis of sex-disaggregated data
- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gender Equality in the Knowledge Society

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-12-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: Nepal Development Research Institute (2016) Gender Equality and knowledge Society

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Deliverable Data sharing

Deliverable files:

<https://marlo.cgiar.org/data/ccafs/projects//125/deliverableDataSharing/Gender%20Equality%20and%20Knowledge%20Society%20-%20NDRI%202016.PDF>

Partners contributing to this deliverable:

Institution	Partner	Type
WISAT - Women in Global Science and Technology	Hafkin, Nancy <nhafkin@wisat.org>	Responsible

D2543 - Stakeholders move to enhance productivity and efficiency in Kenya's dairy sector for lower GHG emissions

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<http://blog.worldagroforestry.org/index.php/2016/09/22/stakeholders-move-enhance-productivity-efficiency-kenyas-dairy-sector-lower-greenhouse-use-gas-emissions/>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Stakeholders move to enhance productivity and efficiency in Kenya's dairy sector for lower greenhouse gas emissions

Description / Abstract: Mitigation actions in energy efficiency / renewable energy for low-emission dairy development in Kenya ? Identification of needs, and technologies ? Description of business models, financing modes and mitigation potential ? Description of barriers to adoption and financing ? Overview of national policies

Publication / Creation date: 2016-09-01

Language: English

Country: Kenya

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Onyango - Susan

Partners contributing to this deliverable:

Institution	Partner	Type
UNIQUE - Unique Forestry and Land Use GmbH	Tennigkeit, Timm <timm.tennigkeit@unique-landuse.de>	Responsible

D2547 - Gender Issues in Biogas Promotion and Use in Kenya

Main Information

Type: Reports and other publications

Subtype: Research workshop report

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gender Issues in Biogas Promotion and Use in Kenya

Description / Abstract: This review has been undertaken in the context of preparation of a concept note for the Kenya dairy NAMA. Biogas promotion is one of the project components. Mitigation actions should aim to achieve greater, more effective, sustainable, and equitable climate change results, outcomes and impacts; ensure that women and men have equal opportunity to contribute to, and benefit from supported activities; and mitigate against potential project risks for women and men arising from the supported activities.¹ In order to ensure that the Kenya dairy NAMA is designed to address these objectives, with support from the Climate Change, Agriculture and Food Security Research Program of the CGIAR (CCAFS), a process of inquiry has been launched involving stakeholders in the dairy and biogas sectors. This review contributes to that process by summarizing existing knowledge on gender issues in biogas promotion and use, and existing experience with addressing gender issues in biogas promotion initiatives. The focus is on household (domestic) biogas.

Publication / Creation date: 2016-05-01

Language: english

Country: Kenya

Keywords: <Not Defined>

Citation: Wilkes, Andreas and van Dijk, Suzanne. 2016. Gender Issues in Biogas Promotion and Use in Kenya: A preliminary review

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Wilkes - Andreas

- Van Dijk - Suzanne

Deliverable Quality check

FAIR Compliant: **F A I R**

Deliverable Data sharing

Deliverable files:

<https://marlo.cgiar.org/data/ccafs/projects//125/deliverableDataSharing/Gender%20issues%20in%20biogas%20promotion%20and%20use%20in%20Kenya.pdf>

Partners contributing to this deliverable:

Institution	Partner	Type
UNIQUE - Unique Forestry and Land Use GmbH	Tennigkeit, Timm <timm.tennigkeit@unique-landuse.de>	Responsible

D2548 - 10 options for agriculture at Marrakech climate talks

Main Information

Type: Reports and other publications

Subtype: Policy brief/policy note/briefing paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/76562>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Options for agriculture at Marrakech climate talks: messages for SBSTA 45 agriculture negotiators

Description / Abstract: SBSTA 45 in Marrakech represents a unique opportunity for Parties to decide on the future of agriculture within the UNFCCC. The process of discussions on issues related to agriculture initiated at COP17 in Durban 2011 culminates at COP22 in Marrakech 2016. The explicit reference to food security in the preamble of the Paris Agreement and the Intended Nationally Determined Contributions which prioritize agriculture as a sector for adaptation and mitigation actions, provide a foundation for Parties to develop appropriate frameworks to support actions within the agricultural sector. SBSTA workshops on agriculture in 2015 and 2016 allowed Parties to share experiences, identify priorities, and propose ways of taking action within the agricultural sector and so provide the core knowledge base to work from. As Parties reach a decision on issues related to agriculture at SBSTA 45, a number of options are available. This report presents ten such options that might contribute to a decision, taking into consideration political priorities, implementation arrangements, timelines and level of ambition. Options outlined in this report are not mutually exclusive and can be combined in many different ways.

Publication / Creation date: 2016-08-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Dinesh D, Vermeulen S, Bacudo I, Martinez-Baron D, Castro-Nunez A, Hedger M, Huyer S,

Iversen P, Laure A, Loboguerrero Rodriguez AM, Martius C, Neufeldt H, Nyasimi M, Richards M, Wollenberg L. 2016. Options for agriculture at Marrakech climate talks: messages for SBSTA 45 agriculture negotiators. CCAFS Report No. 16. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/76562>

DOI: <Not Defined>

Creator / Authors:

- Dinesh, - Dhanush
- Vermeulen, - Sonja
- Bacudo I, -
- Martínez Barón, - Deissy
- Castro-Nunez A, -
- Hedger M, -
- Huyer, - Sophia
- Iversen P, -
- Laure A, -
- Loboguerrero, - Ana Maria
- Martius, - Christopher
- Neufeldt, - Henry
- Nyasimi, - Mary
- Richards, - Meryl
- Wollenberg, - L.

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Nyasimi, Mary<m.nyasimi@cgiar.org>	Other
KU - Københavns Universitet	Vermeulen, Sonja<s.vermeulen@cgiar.org>	Other

D2549 - AWGGCC and AGN pre-SBI event

Main Information

Type: Governance, Administration & Management

Subtype: Events

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<https://ccaafs.cgiar.org/blog/africa-advancing-and-augmenting-unfccc-lima-work-programme-gender#.WKM5uhicbdQ>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Africa advancing and augmenting the UNFCCC Lima Work Programme on Gender

Description / Abstract: Ahead of this year's COP, several groups have met to work on the Lima Work Programme on Gender.

Publication / Creation date: 2016-10-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: Nyasimi, M, Freeman, K and Wandera, S. 2016. Africa advancing and augmenting the UNFCCC Lima Work Programme on Gender. CCAFS Blog

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Nyasimi - Mary
- Freeman - Kathlee
- Wandera - Suzy

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Nyasimi, Mary <m.nyasimi@cgiar.org>	Responsible

D2550 - Africa advancing and augmenting the UNFCCC Lima Work Programme on Gender

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<https://ccafs.cgiar.org/blog/africa-advancing-and-augmenting-unfccc-lima-work-programme-gender#.WKM5uhicbdQ>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Africa advancing and augmenting the UNFCCC Lima Work Programme on Gender

Description / Abstract: Ahead of this year's COP, several groups have met to work on the Lima Work Programme on Gender.

Publication / Creation date: 2016-11-01

Language: English

Country: <Not Defined>

Keywords: UNFCCC, Lima work program on gender; Africa, SBI

Citation: Nyasimi, M, Freeman, K and Wandera, S. 2016. Africa advancing and augmenting the UNFCCC Lima Work Programme on Gender: CCAFS Blog

<https://ccafs.cgiar.org/blog/africa-advancing-and-augmenting-unfccc-lima-work-programme-gender#.WKM5uhicbdQ>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Nyasimi - Mary
- Freeman - Kathlee
- Wandera - Suzy

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Nyasimi, Mary <m.nyasimi@cgiar.org>	Responsible

D2552 - Transforming climate change research: new CCAFS Gender and Social Inclusion Strategy

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<https://ccafs.cgiar.org/news/transforming-climate-change-research-new-ccafs-gender-and-social-inclusion-strategy#.WKNK7BicbdQ>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Transforming climate change research: new CCAFS Gender and Social Inclusion Strategy

Description / Abstract: CCAFS GSI strategy addresses gender and inclusion for different social groups while bearing in mind that women are central to agriculture in many areas of the world.

Publication / Creation date: 2016-05-01

Language: English

Country: <Not Defined>

Keywords: Gender; Social Inclusion; CCAFS

Citation: Hill, C. 2016. Transforming climate change research: new CCAFS Gender and Social Inclusion Strategy. CCAFS Blog:

<https://ccafs.cgiar.org/news/transforming-climate-change-research-new-ccafs-gender-and-social-inclusion-strategy#.WKNK7BicbdQ>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Hill - Catherine

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D2745 - Women changing agriculture for a changing climate

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<https://wle.cgiar.org/thrive/2016/10/25/women-changing-agriculture-changing-climate>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Women changing agriculture for a changing climate

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-10-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: Huyer, S. 2016. Women changing agriculture for a changing climate. WLE Blog.
<https://wle.cgiar.org/thrive/2016/10/25/women-changing-agriculture-changing-climate>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Huyer - Sophia

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D2554 - Indicators on Gender, Agriculture, Climate Change & Food Security

Main Information

Type: Data, models and tools

Subtype: Database/Dataset/Data documentation

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: No

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: The National Assessments on Gender and STI: agriculture, nutrition and the SDGs

Description / Abstract: <Not Defined>

Publication / Creation date: <Not Defined>

Language: <Not Defined>

Country: Nepal; Senegal

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Process of data quality assurance: • Yes, but not documented

Data dictionary: • Yes, but not documented

Are the tools used for data collection available: • Yes, but not documented

Deliverable Data sharing

Deliverable files:

https://marlo.cgiar.org/data/ccafs/projects//125/deliverableDataSharing/Gender_Dataset%20prepared-Nepal.xlsx
https://marlo.cgiar.org/data/ccafs/projects//125/deliverableDataSharing/SENEGAL_GE&KD-QUANTITATIVE_INDICATORS_V1.xlsx

Partners contributing to this deliverable:

Institution	Partner	Type
WISAT - Women in Global Science and Technology	Hafkin, Nancy <nhafkin@wisat.org>	Responsible
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia<S.Huyer@CGIAR.ORG>	Other

D2746 - Gender considerations in today's post COP 21 environment: what's missing?

Main Information

Type: Governance, Administration & Management

Subtype: Events

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

Dissemination Channel: Other

<https://ccaafs.cgiar.org/gender-considerations-to-days-post-cop-21-environment-whats-missing#.WKW5vxicbdQ>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: CGIAR Gender and Agriculture Network Webinar: Gender considerations in today's post COP 21 environment: what's missing?

Description / Abstract: The Paris Agreement has highlighted the opportunity for the global agriculture community (including CGIAR and partners) to influence the climate agenda, and thereby what course of action needs to be taken in order to improve the resilience of smallholders to climate change variability. The purpose of this webinar is to identify what is missing in terms of gender considerations at the policy level in today's post COP21 environment. Last November, an analysis carried out by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) of the country-level climate plans submitted to the UN ahead of climate talks in Paris (COP21) highlighted the need for technical assistance and climate finance for adaptation and mitigation strategies related to agriculture. Based on the Intended Nationally Determined Contributions (INDCs) submitted by 15 November 2015, agriculture and land use appear to be key strategies for climate change mitigation and adaptation in a majority of countries.

Publication / Creation date: 2016-02-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D2748 - Measuring the gender and youth IDOs using the revised P&R

Main Information

Type: Governance, Administration & Management

Subtype: Management report

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<https://cgspace.cgiar.org/rest/bitstreams/86319/retrieve>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Measuring the gender and youth IDOs using the revised P&R

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-09-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <https://cgspace.cgiar.org/rest/bitstreams/86319/retrieve>

DOI: <Not Defined>

Creator / Authors:

- Huyer - Sophia

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D2749 - CCAFS-CARE-IFAD Panel on Building Women's Resilience to Climate Change: Lessons from smallholder farmers

Main Information

Type: Governance, Administration & Management

Subtype: Events

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<https://ccaafs.cgiar.org/cop22-side-event-building-women's-resilience-climate-change-lessons-smallholder-farmers#.WKW9uBicbdR>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Building women's resilience to climate change: Lessons from smallholder farmers

Description / Abstract: The side event will feature lessons learned after three years of Adaptation for Smallholder Agriculture Programme (ASAP) operation and present the recommendations generated on how to strengthen gender equality and women's empowerment in agriculture adaptation programmes. Organizers: CCAFS, CARE, the International Fund for Agricultural Development (IFAD)

Publication / Creation date: 2016-11-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Partners contributing to this deliverable:

Institution	Partner	Type
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CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible
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D1279 - Integrating Gender into Climate Change Adaptation Programs: A Research and Capacity Needs Assessment for Sub-Saharan Africa

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2015

New expected year: 2016

Cross-cutting dimension:

- Gender

Gender level(s):

- Analysis of sex-disaggregated data
- Monitoring/impact assessment of gender outcomes of research/innovations/interventions/policies

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/72482>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Integrating Gender into Climate Change Adaptation Programs: A Research and Capacity Needs Assessment for Sub-Saharan Africa

Description / Abstract: Research shows that paying attention to gender matters not only for the equity of climate change adaptation programs but also for their efficiency and effectiveness. Many organizations working to increase resilience to climate change with local communities also recognize the importance of gender yet the degree to which gender is integrated in project implementation is unclear. This study examines the extent to which organizations involved in climate change and resilience work are incorporating gender-sensitive approaches into their programs using data collected through a Knowledge, Attitudes and Practices (KAP) survey and Key Informant Interviews (KII) targeted at government agencies, local and international NGOs, and other practitioners. The results show that although organizations have access to research on climate change from various sources, more evidence is needed to inform gender integration into climate change adaptation programs across a range of local contexts. Moreover, large gaps exist in integrating gender into projects, particularly during project design. Lack of staff capacity on gender, lack of funding to support gender integration and socio-cultural constraints were identified as key barriers to gender integration by many respondents, particularly from government agencies. Increasing the capacity of organizations to carry out rigorous research and pay greater to the gender dimensions of their programs is possible through greater collaboration across organizations and more funding for gender-sensitive research.

Publication / Creation date: 2016-03-01

Language: en

Country: <Not Defined>

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY

Citation: Bryan E, Bernier Q, Espinal M, Ringler C. 2016. Integrating Gender into Climate Change Adaptation Programs: A Research and Capacity Needs Assessment for Sub-Saharan Africa. CCAFS Working Paper no. 163. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Handle: <http://hdl.handle.net/10568/72482>

DOI: <Not Defined>

Creator / Authors:

- Bryan, - E.
- Bernier, - Quinn
- Espinal, - Marcia
- Ringler, - Claudia

Deliverable Quality check

FAIR Compliant: **F** **A** **I** **R**

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D2751 - Gender Equality in National Climate Action: Planning for Gender-Responsive Nationally Determined Contributions

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender-equality-in-national-climate-action--planning-for-gender-.html>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gender Equality in National Climate Action: Planning for Gender-Responsive Nationally Determined Contributions

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-11-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: Huyer, S., Chao, V. Towle, A. and Baumwoll, J. 2016. Gender Equality in National Climate Action: Planning for Gender-Responsive Nationally Determined Contributions. UNDP. Available at: <http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender-equality-in-national-climate-action--planning-for-gender-.html>

Handle:

<http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender-equality-in-national-climate-action--planning-for-gender-.html>

DOI: <Not Defined>

Creator / Authors:

- Huyer - Sophia
- Chao - Verania
- Towle - Allison
- Baumwoll - Jennifer

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D2753 - Climate Smart Agriculture & Gender: Research into Practice

Main Information

Type: Governance, Administration & Management

Subtype: Events

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL:

<https://ccafs.cgiar.org/climate-smart-agriculture-gender-research-practice#.WKXQCRicbdR>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Climate Smart Agriculture & Gender: Research into Practice

Description / Abstract: What is a gender-responsive approach to Climate-Smart Agriculture in practice? How do research approaches and findings help us understand gender issues in CSA?

Publication / Creation date: 2016-04-01

Language: English

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Huyer - Sophia

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D1736 - Gender and international climate policy: An analysis of progress in gender equality at COP21

Main Information

Type: Outreach products

Subtype: Article for media/Magazine/Other (not peer-reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Capacity Development

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

Dissemination Channel: CGSpace

<https://cgspace.cgiar.org/bitstream/handle/10568/71106/GenderCOP21InfoNote.pdf?sequence=5>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Gender and climate change policy after COP21.

Description / Abstract: <Not Defined>

Publication / Creation date: 2016-02-01

Language: en

Country: <Not Defined>

Keywords: <Not Defined>

Citation: Bossuet, J. and Huyer, S. 2016. Gender and climate change policy after COP21. CCAFS

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Huyer - Sophia

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Huyer, Sophia <S.Huyer@CGIAR.ORG>	Responsible

D1418 - Practice brief on GSI and CSA

Main Information

Type: Outreach products

Subtype: Article for media/Magazine/Other (not peer-reviewed)

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues
- Monitoring/impact assessment of gender outcomes of research/innovations/interventions/policies

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: CGSpace

Dissemination URL:

<http://hdl.handle.net/10568/73049>

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: A Gender-responsive Approach to Climate-Smart Agriculture Evidence and guidance for practitioners

Description / Abstract: Taking a gender-responsive approach to Climate-Smart Agriculture (CSA) means that the particular needs, priorities, and realities of men and women are recognized and adequately addressed in the design and application of CSA so that both men and women can equally benefit.

Publication / Creation date: 2016-04-01

Language: English

Country: <Not Defined>

Keywords: CLIMATE CHANGE, AGRICULTURE, FOOD SECURITY, CLIMATE-SMART AGRICULTURE

Citation: Nelson, S. and Huyer, S. 2016. A Gender-responsive Approach to Climate-Smart Agriculture Evidence and guidance for practitioners. CCAFS Practice Brief. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Available online at: www.ccafs.cgiar.org.

Handle: <http://hdl.handle.net/10568/73049>

DOI: <Not Defined>

Creator / Authors:

- Nelson - Sibyl

- Huyer - Sophia

Partners contributing to this deliverable:

Institution	Partner	Type
FAO - Food and Agriculture Organization of the United Nations	Nelson, Sibyl <sibyln@yahoo.com>	Responsible

D2451 - International Day of Rural Women

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

- Diagnostics/analysis to understand gender issues

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<https://ccafs.cgiar.org/research-highlight/ccafs-highlights-how-technology-helps-women-celebration-international-day-rural#.WKMISxicbdQ>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: CCAFS highlights how technology helps women in celebration of the International Day of Rural Women

Description / Abstract: In celebration of the International Day of Rural Women, we're highlighting projects that use technology to improve the livelihoods of rural women and help to mitigate the effects of climate change.

Publication / Creation date: <Not Defined>

Language: en

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors:

- Freeman - Kathlee
- Nyasimi - Mary

Partners contributing to this deliverable:

Institution	Partner	Type
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CIAT - Centro Internacional de Agricultura Tropical	Nyasimi, Mary <m.nyasimi@cgiar.org>	Responsible
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D2527 - Building Women's Resilience to Climate Change: Lessons from Smallholder Farmers.

Main Information

Type: Outreach products

Subtype: Blog

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- Gender
- Youth

Gender level(s):

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination URL:

<https://ccafs.cgiar.org/blog/building-african-womens-resilience-changing-climate#.WKmj8BicbdQ>

Dissemination Channel: Other

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Building African women's resilience for a changing climate

Description / Abstract: Delegates at a COP22 side event discussed climate change adaptation strategies that prioritized the needs of women.

Publication / Creation date: 2016-11-01

Language: en

Country: <Not Defined>

Keywords: <Not Defined>

Citation: <Not Defined>

Handle:

<https://ccafs.cgiar.org/blog/building-african-womens-resilience-changing-climate#.WKmj8BicbdQ>

DOI: <Not Defined>

Creator / Authors:

- Nyasimi - Mary

Partners contributing to this deliverable:

Institution	Partner	Type
CIAT - Centro Internacional de Agricultura Tropical	Nyasimi, Mary <m.nyasimi@cgiar.org>	Responsible



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5.3 Project Highlights

Project highlight 145	
Title: Closing the Gender Gap in Agriculture	
Author: Sophia	Subject: Women, gender, agriculture, climate change, technology, assets, equality
Publisher: SAGE Publications	Year reported: 2016
Project highlights types: <ul style="list-style-type: none"> • Gender and social inclusion • Inter-center collaboration • Food security 	Is global: No
Start date: Jan 2016	End date: Dec 2016
Keywords: Women, gender, agriculture, climate change, technology, assets, equality	Countries:
Highlight description: <Not Defined>	
Introduction / Objectives: <Not Defined>	
Results: <Not Defined>	
Partners: <Not Defined>	
Links / Sources for further information: <Not Defined>	

Project highlight 161

Title: Gender Equality and Knowledge Society

Author: National Development Research Institute-Nepal

Subject: National assessments

Publisher: NDRI

Year reported: 2016

Project highlights types:

- Gender and social inclusion

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords:

Countries: Nepal

Highlight description: This is a national assessment on gender policies which also assess gender policy in non-governmental organizations along with the governmental organizations including National Planning Commission.

Introduction / Objectives: The main objective of the study is to make an integrated database of gender's representation especially women in various sectors such as health; social; economy; and opportunity and capability. Specific objectives: i. To provide a framework for data analysis to achieve inclusive knowledge society ii. To encourage the mainstreaming of gender in data collection, statistics and indicators for the knowledge society so that gender issues can be taken into account in policy and action.

Results: <Not Defined>

Partners: WISAT

Links / Sources for further information: <Not Defined>

Project highlight 162

Title: Addressing gender in agricultural research for development in the face of a changing climate: Where are we and where should we be going?

Author: P. Kristjanson, E. Bryan, Q. Bernier, J. Twyman, R. Meinzen-Dick, C. Kieran, C. Ringler, C. Jost, C. Doss

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Gender and social inclusion

Is global: Yes

Start date: Jan 2016

End date: Dec 2016

Keywords:

Countries:

Highlight description: <Not Defined>

Introduction / Objectives: <Not Defined>

Results: <Not Defined>

Partners: <Not Defined>

Links / Sources for further information: <Not Defined>

Project highlight 163

Title: integrating gender and social inclusion into the dairy NAMA in Kenya

Author: Katie Tavenner and Todd Crane

Subject: NAMA, Dairy, Kenya

Publisher: ILRI

Year reported: 2016

Project highlights types:

- Gender and social inclusion
- Inter-center collaboration

Is global: No

Start date: Jan 2016

End date: Dec 2016

Keywords:

Countries: Kenya

Highlight description: <Not Defined>

Introduction / Objectives: his guide provides a synthesis of lessons learned and recommendations for gender equitable low-emission development. The guide draws upon both extant literature and project experiences revealed by industry experts (n=12). To safeguard the anonymity of participants, no personal names or official positions are given in this document. This guide solely focuses on high-potential dairy development areas, as these are the priority sites for Kenya's NAMA.

Results: <Not Defined>

Partners: ILRI

Links / Sources for further information: <Not Defined>

Project highlight 168

Title: Review of Gender Responsive Climate Change Actions in East and West Africa

Author: Mary Nyasimi

Subject:

Publisher:

Year reported: 2016

Project highlights types:

- Gender and social inclusion
- Policy engagement

Is global: No

Start date: Sep 2016

End date: Dec 2017

Keywords:

Countries:

Highlight description: African countries are involved in understanding the interrelations between climate change and gender, youth and other vulnerable groups, which is prerequisite in addressing the inequalities and developing gender responsive climate change policies and plans. Some of the policies and plans have integrated gender responsive actions. This project aims to document case studies to showcase good practices on gender-responsive climate policies/actions that promote climate resilient livelihoods in agriculture and agriculture related sectors (energy, water, technology) in African countries. More specifically, the review process will focus on adaptation strategies and climate-smart agriculture initiatives that countries are proposing to implement within their policies and plans.

Introduction / Objectives: 1. Review how countries promote gender mainstreaming into climate change policy and regulatory frameworks, NDCs, NAPs and the climate-smart agriculture framework 2. Review how countries promote gender-sensitive adaptation measures to address the impacts of climate change on women. 3. Review the governance structures for implementing the plans and policies and determine if they are gender transformative/sensitive 4. Assess how the policies and plans include priorities and needs of women 5. Assess how the plans and policies support and enhance training and capacity building for women so as to increase awareness and their participation in decision making on climate change issues

Results: <Not Defined>

Partners: <Not Defined>

Links / Sources for further information: <Not Defined>

6. Activities

A541 - GSI in CSA: Practice Brief

Description: Joint development of a practice brief with FAO.

Start date: Jan 2016

End date: Jun 2016

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Huyer, Sophia
<S.Huyer@CGIAR.ORG>

Status: Complete

Overall activity or progress made during this cycle: GSI in Collaboration with FAO and GACCA produced the Practice Brief

Deliverables in this activity:

- D1418: Practice brief on GSI and CSA

A542 - The potential of HH methodologies in scaling up CSA

Description: - Explore the potential of HH methodologies for scaling up CSA with World Bank, IFAD (other relevant organizations as needed) - Identify methodologies, processes and approaches to include gender equity and equality in development of mechanisms and tools to facilitate the operationalization of CSA

Start date: Mar 2016

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Huyer, Sophia
<S.Huyer@CGIAR.ORG>

Status: On-going

Overall activity or progress made during this cycle: Has been developed into a longer project with CIMMYT who submitted a concept note early 2016.

Deliverables in this activity:

- D1281: Presentations on gender and climate change given at high profile events
- D1419: HH Methodologies for Scaling up CSA

A544 - GSI in CCAFS: Lessons, good practices, and implications for scaling up

Description: This activity will include a workshop which will bring together CCAFS staff/partners from different initiatives across regions and flagships to share and document learning (approaches, challenges, good practices, scaling up, etc.). Outputs of the workshop will include a conceptual framework for designing and implementing CSA projects and measuring impacts. Outputs will be disseminated through appropriate pathways such as papers, policy briefs, journal articles, blogs, social media, posters, videos, etc. (and other relevant media to be identified).

Start date: May 2016

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Huyer, Sophia
<S.Huyer@CGIAR.ORG>

Status: On-going

Overall activity or progress made during this cycle: Workshop for F1 in planning for 2016 and possibly F4. F2 synthesis also will be undertaken (Sophia Huyer with F2).

Deliverables in this activity:

- D1420: GSI communications
- D2724: CCAFS Gender and Social Inclusion Strategy
- D1447: Special journal issue on Supporting Women Farmers in a Changing Climate
- D2538: Closing the Gender Gap in Agriculture
- D1450: Integrating Gender in Mechanisms and Tools to Facilitate the Operationalization of CSA
- D2546: Framework for improved gender integration into Climate-Smart Agriculture projects M&E: MAP-Norway experience
- D2547: Gender Issues in Biogas Promotion and Use in Kenya
- D2554: Indicators on Gender, Agriculture, Climate Change & Food Security
- D2750: Youth Decision Making in Agricultural Climate Change Adaptation
- D1279: Integrating Gender into Climate Change Adaptation Programs: A Research and Capacity Needs Assessment for Sub-Saharan Africa

A545 - Outreach and communications

Description: This will be an ongoing activity throughout the year to support the publication (in different formats) and dissemination of CCAFS research highlighting GSI -- through papers, briefs, journal articles, blogs, participation at high-level events, regional fora, updating of website, CCAFS, CG, and external networks and platforms, etc.

Start date: Jan 2016

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Nyasimi, Mary
<m.nyasimi@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: This will be an ongoing activity throughout the year to support the publication (in different formats) and dissemination of CCAFS research highlighting GSI -- through papers, briefs, journal articles, blogs, participation at high-level events, regional fora, updating of website, CCAFS, CG, and external networks and platforms, etc.

Deliverables in this activity:

- D1281: Presentations on gender and climate change given at high profile events
- D1667: Closing the gender gap in climate-smart agriculture
- D1447: Special journal issue on Supporting Women Farmers in a Changing Climate
- D1736: Gender and international climate policy: An analysis of progress in gender equality at COP21
- D1418: Practice brief on GSI and CSA
- D1824: Supporting women farmers in a changing climate: five policy lessons
- D2532: Gender in Agriculture Partnership
- D2550: Africa advancing and augmenting the UNFCCC Lima Work Programme on Gender
- D2549: AWGGCC and AGN pre-SBI event
- D2451: International Day of Rural Women
- D907: Paris gender seminar: Closing the gender gap
- D2745: Women changing agriculture for a changing climate
- D2746: Gender considerations in today's post COP 21 environment: what's missing?
- D2748: Measuring the gender and youth IDOs us

A546 - Reporting 2015

Description: Coordinating reporting of GSI-related activities from 2015.

Start date: Jan 2016

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Nyasimi, Mary
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Status: On-going

Overall activity or progress made during this cycle: Being completed with submission of these inputs to P&R.

Deliverables in this activity:

- D1281: Presentations on gender and climate change given at high profile events
- D907: Paris gender seminar: Closing the gender gap
- D1420: GSI communications
- D1282: Communications tools regularly updated
- D1667: Closing the gender gap in climate-smart agriculture
- D1447: Special journal issue on Supporting Women Farmers in a Changing Climate
- D1736: Gender and international climate policy: An analysis of progress in gender equality at COP21
- D1418: Practice brief on GSI and CSA
- D1824: Supporting women farmers in a changing climate: five policy lessons

A549 - National Assessments on Gender, Science, Technology and Innovation

Description: Revision of the Gender Equality - Knowledge Society indicator framework to include indicators on: women's representation in agricultural sciences, transportation and energy; child and maternal nutrition levels. Addition of 3 national datasets.

Start date: Dec 2015

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Huyer, Sophia
<S.Huyer@CGIAR.ORG>

Status: On-going

Overall activity or progress made during this cycle: Underway with WISAT.

Deliverables in this activity:

- D1283: Theme 4.1 2014 annual report
- D1281: Presentations on gender and climate change given at high profile events
- D2539: National Assessment on Gender Equality in the Knowledge Society in Nepal
- D1465: Country studies on Gender Equality and the Knowledge Society : Nepal and Senegal
- D2554: Indicators on Gender, Agriculture, Climate Change & Food Security

A550 - Ongoing support to Flagships and Regional Programmes

Description: GSI Unit to provide support in conceptualizing and synthesizing current and planned gender activities in Flagships, inputs and advice on project activity to increase gender results; and support in measuring and achieving programme targets.

Start date: Dec 2016

End date: Dec 2016

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Huyer, Sophia
<S.Huyer@CGIAR.ORG>

Status: Complete

Overall activity or progress made during this cycle: GSI strategy was finalized and published as CCAFS working Paper

Deliverables in this activity:

<Not defined>

A576 - Addressing gender challenges in agricultural research for development in the face of a changing climate

Description: The objective of this initiative is to review gender methods, tools, and/or approaches, recently developed and applied by CGIAR/CCAFS researchers to better understand key gender-related research questions, methods and outcomes from different methods for integrating gender and social inclusion to agriculture and climate change research (in relation to the CGAIR gender and youth intermediate development outcomes (IDOs of increased control of productive resources, participation in decision making, empowerment, etc.).

Start date: Oct 2015

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Huyer, Sophia
<S.Huyer@CGIAR.ORG>

Status: On-going

Overall activity or progress made during this cycle: Expected date of completion April 2016. Awaiting inputs from other researchers to finalize research.

Deliverables in this activity:

- D1447: Special journal issue on Supporting Women Farmers in a Changing Climate
- D1282: Communications tools regularly updated

A736 - Integrating gender and social inclusion into the dairy NAMA in Kenya Activity

Description: This activity is to support integration of gender and social inclusion into the design of the dairy NAMA in Kenya through analysis of best practices and action research on GSI issues and options conducted together with partners. The goal of these activities is to ensure that the Kenya dairy NAMA leverages best practice to deliver benefits to women and other marginalized groups at large scale. These activities will contribute to two CCAFS gender IDOs: equitable access to assets and other livelihood support systems among women and other marginalized groups, and enhanced capacity of women and other marginalized groups to actively participate in and have equitable control in decision making processes. Specific objective of is to ensure that the dairy development and biogas promotion initiatives described in the Kenyan dairy NAMA concept note include measures to effectively increase opportunities for women and other marginalized groups to benefit from the initiatives supported.

Start date: Feb 2016

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Huyer, Sophia
<S.Huyer@CGIAR.ORG>

Status: On-going

Overall activity or progress made during this cycle: 4 Info notes, published via CCAFS and Kenya Dairy Board 2 working papers published Workshop held to define specific research questions for dairy and biogas NAMA initiatives.

Deliverables in this activity:

- D1283: Theme 4.1 2014 annual report
- D1281: Presentations on gender and climate change given at high profile events
- D2543: Stakeholders move to enhance productivity and efficiency in Kenya's dairy sector for lower GHG emissions
- D2547: Gender Issues in Biogas Promotion and Use in Kenya

A737 - Capacity Building of African Policy makers on Gender Responsive climate change policies

Description: The AWGGCC and GSI aims to strengthen the capacity of AGN in gender and climate change responsive negotiations and responses during the COP and beyond as we adopt the Paris Agreement work program. At the same time, AWGGCC intends to facilitate capacity building of policy makers at national level on gender responsive climate change policy (Kenya)

Start date: Oct 2016

End date: Dec 2016

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Nyasimi, Mary
<m.nyasimi@cgiar.org>

Status: Complete

Overall activity or progress made during this cycle: This activity was conducted in the last quarter of 2016, a workshop report was written and a blog published

Deliverables in this activity:

- D1283: Theme 4.1 2014 annual report
- D1281: Presentations on gender and climate change given at high profile events

A739 - Using CCAFS GSI products to inform policy and negotiations

Description: GSI partners, the AWGGCC and AGN are using GSI products to draft UNFCCC-SBI submissions on gender and climate change

Start date: Aug 2016

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Nyasimi, Mary
<m.nyasimi@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: 5 UNFCCC-SBI submissions were made in 2016 by various countries and by AGN

Deliverables in this activity:

- D1281: Presentations on gender and climate change given at high profile events
- D1420: GSI communications
- D2536: Identifying elements for the Lima Work Program on Gender
- D2549: AWGGCC and AGN pre-SBI event
- D2550: Africa advancing and augmenting the UNFCCC Lima Work Programme on Gender
- D1736: Gender and international climate policy: An analysis of progress in gender equality at COP21
- D2751: Gender Equality in National Climate Action: Planning for Gender-Responsive Nationally Determined Contributions

A741 - Implementing Gender and CSA: A Framework for Action

Description: CCAFS and partners propose to move forward the understanding of the gender implications of CSA practices and technologies in terms of the implications for gender and social inclusion of trade-offs of food security, adaptation and mitigation of CSA technologies and practices. It is proposed to develop a common action framework and indicators for design and application in CSVs in order to understand sex- and youth-disaggregated adoption profiles for a range of CSA options. This will include cross-regional comparison and customizing of approaches. The goal is to develop a common methodology that can be used to compare and draw lessons from different regions for different CSA practices.

Start date: Nov 2016

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Nyasimi, Mary
<m.nyasimi@cgiar.org>

Status: On-going

Overall activity or progress made during this cycle: Case studies have been initiated in LAM, EA, WA and SA. draft reports are available from LAM and WA. All the case studies will be ready by May 2017 and ready for journal submission

Deliverables in this activity:

- D2546: Framework for improved gender integration into Climate-Smart Agriculture projects M&E: MAP-Norway experience
- D2636: Seasonal forecast information in northern Ghana – a gendered perspective
- D2646: Review of CSA Practices and Technologies for Gender Responsiveness and Transformation in Kenya
- D2848: Methodology for monitoring gender indicators related to climate smart agriculture practices.

A742 - Review of Gender Responsive Climate Change Actions in East and West Africa

Description: African countries are involved in understanding the interrelations between climate change and gender, youth and other vulnerable groups, which is prerequisite in addressing the inequalities and developing gender responsive climate change policies and plans. Some of the policies and plans have integrated gender responsive actions. This activity aims to review existing climate change policies, programs and plans that promote climate resilient livelihoods in agriculture and agriculture related sectors (energy, water, technology) in African countries. More specifically, the review process will focus on adaptation strategies and climate-smart agriculture initiatives that countries are proposing to implement within their policies and plans.

Start date: Sep 2017

End date: Dec 2017

Activity leader: CIAT - Centro Internacional de Agricultura Tropical Nyasimi, Mary
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Status: On-going

Overall activity or progress made during this cycle: Desk review of climate change policies, program and plans was done and draft reports written. The reports are under review and will be published as CCAFS working paper and published at peer-reviewed journals

Deliverables in this activity:

- D2626: Review of Gender Responsive Climate Change policies/programs in East and West Africa

7. Leverages

No leverages added