Outcome case studies reported in 2015

Each year program participants are asked to report on outcomes – 'use of research by non-research stakeholders who help drive impacts'. This file contains the results of that reporting.

After submission, outcome case studies are evaluated by two CCAFS core team members and two external evaluators (one an experienced research for development specialist and one a representative of a non-research stakeholder group). The case studies are evaluated on three variables: significance (weighted heavily), evidence of the outcome, and coherence of the case study. An overall score is given each case study, with the core team member scores weighted 33% of overall score and the external evaluators weighted 66%.

The outcomes case studies are eventually classified on a five-point scale: 1 – not an outcome or poor outcome; 2 – not a good outcome; 3 – OK: notable; 4 – Good; 5 – Excellent.

Of the case studies the following are regarded as sufficiently developed for reporting (though some will be subject to follow up requests for further information).

EXCELLENT:

- US$ 75 million investments by IFAD in climate-smart agriculture (3 initiatives: Comoros; Liberia; Uganda) (P2)
- State Government of Haryana launches a program to pilot 500 CSVs in rice-wheat systems (P25)
- Climate information services in Senegal now reaching over 7 million rural people (P90)
- Agriculture was high profile in UNFCCC agreements in Paris, with several initiatives having CCAFS inputs (P91)
- Dissemination of climate-smart feeding and husbandry practices among 600,000 dairy farmers, 25% of which were women. (Kenya) (P111)
- Index insurance protects a million Maharashtra farmers (P119)

GOOD

- Government of India launches improved subsidy program to install 10,000 solar-pumps for irrigation (P60)
- Scenario-guided policy development in 7 countries (Honduras, Cambodia, Bangladesh, Uganda, Burkina Faso, Colombia, Ghana) (P63)
- The Nepalese and Ugandan governments adopted policies to increase the availability and use of crop diversity for climate resilience (P66)
- Ghana's National Climate-Smart Agriculture and Food Security Action Plan developed through the CSA science-policy platform (P90)
- ECOWAS (+member-countries) have used the scientific and technical knowledge and information generated by CCAFS to develop a CSA implementation framework and a CSA strategy for West Africa (P90)

OK – NOTABLE

- ICPAC provides high resolution quantified seasonal forecasts to East Africa (P40)
- Working through the FAO, 189 countries adopted guidelines to integrate genetic resources in national climate change adaptation strategies (P88)
- INDCs were strengthened in Kenya (P12), Uganda (P108), Tanzania (P108), Costa Rica (P63/P118), Colombia (P118)
- Myanmar developed its Climate-Smart Agriculture Strategy (P114)
- Funds allocated to climate services by Colombia Ministry of Agriculture and Rural Development (MADR). This is for agroclimatic forecasts, crop modelling improvement considering climate variables, experimental plots in different parts of the country, and support of national policy and action plans (P42)
- Three country workplans of scaling up mitigation in rice (Vietnam, Bangladesh and Colombia) (P21)

To be further investigated before making a final rating:

- Costa Rica develops a Low Emission Livestock Strategy (P2)
- Creating Geographical Software and Building Capacity for its Use Strengthens Climate Change Analysis in Agriculture (P43).

Project: P1 - (ICRISAT WA) Capacitating science-policy exchange platforms to mainstream climate change into national agricultural and food security policy plans

Start date (dd-MM-yyyy)	01-03-2014	**End date (dd-MM-yyyy)**	31-12-2017
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	ICRISAT - International Crops Research Institute for the Semi-Arid Tropics - India	**Project leader**	Traore, Pierre C. Sibiry <p.s.traore@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Facilitating multi-scale interaction to create enabling conditions for for inclusive climate policy formulation and implementation

Outcome statement: The project activities are contributing to bring science-based information to policy actors at all levels, and facilitating interaction at different scales, including national and districts for inclusive policy formulation and implementation.

Research Outputs: - Active and vibrant district platforms (3 in each country where the project works)
- M&E framework developed
- Improved policy literacy gap on climate change at district level
- District level futures(scenarios) on climate smart agriculture developed, of which certain have been quantified following AgMIP protocols at high levels of detail
- Improved communication and networking of flagship4 activities
- Radio talks, interactive workshop, farmers' forum and festivals held for information broadcasting.
- Various communities sensitized by district platforms on CSA practices and measures for mitigating the climate change effects
- Analysis of disconnect between national policies and local reality, and development of roadmaps to address the policy gaps (in each country)

Research Partners: CSIR-Animal Research Institute, Ghana

Activities that contributed to the outcome: - District-level scenario with stakeholders of sub-national platforms to envision the future of their agriculture practices and identified drivers of change in the 30 years to come
- Climate talks to disseminate the climate policy information and sensitize policy actors on the policy gaps
- M & E framework pilot-tested at the district level in each country
- Meeting of district platforms with high- level actors (MPs) for advocacy on investments towards agricultural adaptation

Non-research Partners: AEDD- Agence de l'Environnement et du developpement Durable (Mali)
AMEDD- Association Malienne D'Eveil pour le Developpement durable (Mali)
MAER-DA Direction de l'agriculture (Senegal)
IUCN - International Union for the Conservation of Nature (PACO - Burkina Faso)

Output Users: Planning officers in the ministries of Agriculture and Environment in Ghana; Mali and Senegal Policy decision-makers: District Assemblies of Jirapa, Lawra and Nandom (Ghana); members of the nation council of agriculture and rural development at the Parliaments of Mali and Senegal

How the output was used: The policy review and disconnect analysis reports were shared with the ministries and the MPs. For instance, in Mali, based on the disconnect analysis the MPs agreed to revisit the natural resource management policy. The process is going-on.

Evidence of the outcome: A consultancy was conducted by Dr Carla Roncoli (Emory University) to analyze the relationship between activities-outcomes. A draft paper is in preparation for journal publication. In Ghana, platforms facilitated development of local rules to protect the environment and these by-laws will be compiled to be used in the district policy.

References: Upcoming

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies
FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Etudes Locales MLDIA 19 Nov.doc

Project: P2 - (CIAT LAM) Relevant Climate Change Information meets Decision-Making to influence Policy and Institutions for Climate Resilient Food Systems

Start date (dd-MM-yyyy)	01-03-2014	**End date (dd-MM-yyyy)**	31-12-2017
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	CIAT - Centro Internacional de Agricultura Tropical - Colombia	**Project leader**	Laderach, Peter <p.laderach@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: CIAT/CCAFS science contributes to programming and implementation of about 100mnUSD IFAD financing for farmers' resilience.

Outcome statement: IFAD increasingly adopts CIAT/CCAFS science in project design and implementation.
Comoros:CIAT conducts climate/environmental assessments that directly inform the design of the project (4mnUSD), prioritizing options for future IFAD interventions.
Liberia:CIAT science informed design of ASAP and participates in the design process (4.5mnUSD).
Uganda:PRELNOR project approved by Parliament (71mnUSD) drew on CIAT science for the rural livelihood component.
Data on CC impacts on coffee in Nicaragua and recommendations for adaptation were used in the design and implementation of NICADAPTA (24mnUSD).

Research Outputs: Comoros:
Summary report of preliminary recommendations on the measures that are proposed to decrease the vulnerability of livelihoods dependent on the selected value chains.
Liberia:
Schroth, etal 2015. Vulnerability to climate change of cocoa in West Africa: patterns, opportunities and limits to adaptation
Schroth, etal 2015. A regional approach to climate change adaptation for tropical commodities: the example of cocoa in West Africa
Climate vulnerability and adaptation of the smallholder cocoa and coffee value chains in Liberia. Working Paper No. 134
Uganda:
https://ccafs.cgiar.org/publications/rapid-rural-appraisal-report-northern-uganda
https://ccafs.cgiar.org/publications/social-ecological-assessment-landscapes-uganda
http://www.ifad.org/climate/asap/stories/nicaragua.htm
Mwongera, C., K. M. Shikuku, J. Twyman, L. Winowiecki, E. Ampaire, M. Koningstein and S. Twomlow. 2014. Climate Smart Agriculture Rapid Appraisal (CSA-RA) Report for Northern Uganda.
Nicaragua:
Integrated framework for Assessing Vulnerability to Climate Change:
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0088463
Predicted impact of climate change on coffee supply chains:
http://link.springer.com/chapter/10.1007%2F978-3-642-14776-0_42
Escenarios del Impacto del Clima Futuro en Áreas de Cultivo de Café en Nicaragua:
http://dapa.ciat.cgiar.org/wp-content/uploads/2012/03/Informe-Nicaragua-final.pdf

Research Partners: CCAFS

Activities that contributed to the outcome: According to the Validation Study, the NICADAPTA project contracted CIAT to ‘guide’ its design in 2014, as they thought CIAT’s climate modeling could support prioritizing specific activities to increase resilience of coffee and cocoa value chains. As a result of this successful collaboration, the same type of contractual relationship was developed for ASAP Liberia, Uganda and Comoros to prioritize investment. According to a key informant for Liberia, CIAT research had been very important for the design in the Latin America region enabling IFAD “to see that there can be an impact of climate change on the value chain and what kind of technical option was feasible”.
IFAD and CIAT/CCAFS’s collaboration is increasing: a learning event co-hosted at IFAD will be held on 24 February 2016: ‘’How to design value chains programmes that address climate risks’’.

Non-research Partners: Rainforest Alliance (Schroth)
Stephen Twomlow - The International Fund for Agricultural Development (IFAD)

Output Users: The International Fund for Agricultural Development (IFAD)

How the output was used: IFAD projects in Nicaragua,Liberia,Uganda and Comoros included CIAT/CCAFS research to prioritize investment.The CC specialist at IFAD reported that IFAD became interested in developing a cocoa and coffee value chain in Western and Central Africa “to ensure that good lessons from "NICADAPTA"can be included to improve and design these two projects”.

Evidence of the outcome: Validation report (uploaded): "How CIAT’s climate research informs and influences decision making in IFAD and the cocoa and coffee sector globally. An outcomes validation report". By Julius Nyangaga Right Track Africa. 2016.

Aide memoire Mission de formulation du 27 septembre au 06 octobre 2015
http://ifad.org/operations/projects/design/113/esa/uganda.pdf
http://operations.ifad.org/web/ifad/operations/country/project/tags/uganda/1681/project_overview
http://www.ifad.org/climate/asap/factsheets/ASAP_factsheet_Nicaragua_WEB.pdf
http://operations.ifad.org/documents/654016/57b47380-5c1d-46e5-b640-44ea4fd68b75
http://www.ifad.org/climate/asap/stories/nicaragua.htm

References: Validation report (uploaded): "How CIAT's climate research informs and influences decision making in IFAD and the cocoa and coffee sector globally. An outcomes validation report". By Julius Nyangaga Right Track Africa. 2016.

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: CIAT outcomes validation study Feb2016.pdf

Outcome case study #2

Title: CIAT science is included in Costa Rican coffee NAMA proposal financed by NAMA facilities.

Outcome statement: CIAT coffee climate science helped secure funding for the Costa Rican coffee NAMA. Specifically, the NAMA proposal funded partly leverages on impact assessments on and mitigation options for coffee systems that CIAT shared with the Ministry of Agriculture and Livestock (MAG), the Gesellschaft International Zusammenarbeit (GIZ), the Instituto de Café de Costa Rica (ICAFE) and the NAMA facility review mission. Moreover, CIAT trained MAG employees on these results, which were used as background information for the NAMA.

Research Outputs: Results by Rahn et al. included in the proposal to recommend specific activities to be financed:
Rahn E, etal (2014) Climate change adaptation, mitigation and livelihood benefits in coffee production: where are the synergies? Mitig Adapt Strateg Glob Change (2014) 19:1119–1137: DOI 10.1007/s11027-013-9467-x
Baca etal 2014.An Integrated Framework for Assessing Vulnerability to Climate Change and Developing Adaptation Strategies for Coffee Growing Families in Mesoamerica. PLoS ONE 9(2): e88463. doi:10.1371/journal.pone.0088463
Bunn etal.2014. A bitter cup: climate change profile of global production of Arabica and Robusta coffee. Climatic Change (2015) 129:89–101 DOI 10.1007/s10584-014-1306-x
Ovalle-Rivera etal.2015.Projected Shifts in Coffea arabica Suitability among Major Global Producing Regions Due to Climate Change. PLoS ONE 10(4): e0124155. DOI:10.1371/journal.pone.0124155
van Rikxoort etal 2014. Carbon footprints and carbon stocks reveal climate-friendly coffee production. Agronomy for Sustainable Development. 34 (4) 887-897: DOI 10.1007/s13593-014-0223-8
Vermeulen etal.2013. Addressing uncertainty in adaptation planning for agriculture. PNAS: Doi/10.1073/pnas.1219441110
http://ciat.cgiar.org/wpcontent/uploads/2012/12/policy_brief2_mesoamerican_coffee.pdf
http://ciat.cgiar.org/wp-content/uploads/2013/04/policy_brief12_shared_value.pdf

Research Partners: CIAT
CCAFS
Instituto del Café de Costa Rica (ICAFE)

Activities that contributed to the outcome: CIAT supports MAG within the MAG-FITTACORI collaboration agreement. During 2014/2015 CIAT had frequent personal/email exchanges with GIZ, who led the NAMA facility proposal, to discuss CIAT climate science on coffee.
Laderach was invited to share CIAT coffee climate science with NAMA facility review mission and continued sharing it over email afterwards.
During 2014 and 2015 CIAT supported the position of Ing.Vargas (MAG) dedicated to the coffee NAMA development. In 10/2014 Vargas and Murillo were trained at CIAT in MAC curves, climate suitability modeling, carbon stock and foot print calculations. Surveyed before the training, on average they rated (1-5 scale) their knowledge of MAC 1, ECOCROP 3, MAXENT 1, while at the end they rated it respectively 4.5, 4 and 4. They said they were highly likely to apply to their NAMA work the methods learned.
CIAT scientist supported MAG in their presentation of the coffee NAMA at COP20 in Lima.

Non-research Partners: NA

Output Users: Ministry of Agriculture and Livestock (MAG)
Gesellschaft International Zusammenarbeit (GIZ)
NAMA facility review mission

How the output was used: CIAT climate science is cited in the proposal to recommend specific activities to be financed by the coffee NAMA (Rahn et al, 2013). The proposal also cites CIAT science on carbon stock/foot print in coffee systems, threats of climate change impacts, co-benefits and carbon in-setting, transformative adaptation, and farmer's vulnerability.

Evidence of the outcome: ''A recent research paper identified agroforestry systems and planting of boundary trees, both of which will be promoted under Output A....(Rahn etal.2013)''
Potential carbon stock and footprint in coffee systems(Rahnetal2014,vanRikxoortetal2014)
Threats of climate change impacts(Bunnetal2014,Ovalleetal2014)
Co-benefits and carbon insetting(Rahnetal2014)
Vulnerability of farmers(Bacaetal2013)
Transformative adaptation(Vermeulenetal2013)
Approved NAMA
Emails/survey before/after CIAT training.

References: Results by Rahn et al. included in the proposal to recommend specific activities to be financed:
Rahn E, etal (2014) Climate change adaptation, mitigation and livelihood benefits in coffee production: where are the synergies? Mitig Adapt Strateg Glob Change (2014) 19:1119–1137: DOI 10.1007/s11027-013-9467-x
Baca etal 2014.An Integrated Framework for Assessing Vulnerability to Climate Change and Developing Adaptation Strategies for Coffee Growing Families in Mesoamerica. PLoS ONE 9(2): e88463. doi:10.1371/journal.pone.0088463
Bunn etal.2014. A bitter cup: climate change profile of global production of Arabica and Robusta coffee. Climatic Change (2015) 129:89–101 DOI 10.1007/s10584-014-1306-x
Ovalle-Rivera etal.2015.Projected Shifts in Coffea arabica Suitability among Major Global Producing Regions Due to Climate Change. PLoS ONE 10(4): e0124155. DOI:10.1371/journal.pone.0124155
van Rikxoort etal 2014. Carbon footprints and carbon stocks reveal climate-friendly coffee production. Agronomy for Sustainable Development. 34 (4) 887-897: DOI 10.1007/s13593-014-0223-8
Vermeulen etal.2013. Addressing uncertainty in adaptation planning for agriculture. PNAS: Doi/10.1073/pnas.1219441110
http://ciat.cgiar.org/wpcontent/uploads/2012/12/policy_brief2_mesoamerican_coffee.pdf
http://ciat.cgiar.org/wp-content/uploads/2013/04/policy_brief12_shared_value.pdf

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: 1_Proposal_NSP_LowEmissionCoffee_2014-10-08_FINAL.pdf

Outcome case study #3

Title: CIAT-MAG-CATIE collaboration supported the process leading to Low Emission Livestock Strategy Costa Rica (Joint FP4-LAM/FP3-LivestockPlus)

Outcome statement: In 2015, CIAT-MAG-CATIE collaboration supported the final stages of the process of the Low Emission Livestock Strategy (Estrategia Nacional para el Desarrollo de la Ganadería Baja en Carbono, ENDGBC) in Costa Rica, which is the 2015-2034 policy framework for the livestock sector. CIAT-MAG facilitated workshops and supported the development of the Livestock NAMA program support. CIAT-MAG also facilitated regional commissions on livestock, PITTA low carbon livestock research and supported the management of the process.

Research Outputs: The outputs from the CIAT-MAG-CATIE collaboration are:

• The First Pasture Congress with sharing of knowledge on pasture management for livestock production (2015), where the National Network of Pastures and Forages was launched.
• Action Plan of Livestock NAMA program support with defined role for actors involved
• Complementarity of supporting organizations and programs to achieve the concrete objectives of the Livestock NAMA program support.
• Summary of actions/lessons learned and systematization of the process
• A scoping report on the current state of Livestock NAMA
• Official Newsletter of the systematization of the National Low Carbon Livestock Plan
• Dissemination in newspapers, blog posts and press conferences.

Research Partners: CCAFS
Tropical Agricultural Research and Higher Education Center (CATIE)
National Institute of Agricultural Innovation and Technology Transfer (INTA)
World Agroforestry Centre (ICRAF)

Activities that contributed to the outcome: The final stages of the EDGBC were supported by CIAT-MAG collaboration, which facilitated a series of workshops, the implementation of regional livestock commissions, and the implementation of the Low Carbon Livestock PITTA (research body). The project also supported the launch of the National Network of Pastures and Forages; the First Pasture Congress to share knowledge on pasture management practices for sustainable livestock production. The project trained Livestock Scientist, Mr. Diego Tovar from CATIE and two researchers from INTA on GHG quantification for the Livestock NAMA. CIAT has complemented the instrument for the baseline survey (to be applied in 1,000 farms in Costa Rica) with gender focused questions.

Non-research Partners: Ministry of Agriculture and Livestock (MAG) of Costa Rica

Output Users: Ministry of Agriculture and Livestock (MAG) of Costa Rica
Mesa Ganadera (Livestock roundtable)
PITTA Ganaderia Baja en Carbono (Research and Agricultural Technology Transfer Programme)
Comisión Nacional de Ganadería (National livestock committee)
Comisiones Regionales de Ganaderia (Regional livestock committees)
CAN (Consejo Agropecuario Nacional) (National agriculture and livestock council)

How the output was used: The collaboration supported the CAN reach agreement which will support the future process of implementation of the EDGBC. The collaboration also supported a priority line of action in the EDGBC, which is the inception of the National Network of Pastures and Forages.

Evidence of the outcome: Final report ENDGBC Costa Rica 2015-2034.
http://www.mag.go.cr/bibliotecavirtual/a00366.pdf
Summary of the ENDGBC Costa Rica:
http://www.mag.go.cr/bibliotecavirtual/a00367.pdf
NAMA Livestock Costa Rica 2015.
http://www.mag.go.cr/bibliotecavirtual/a00368.pdf
Presentation of Dr. Rolando Barahona (Colombian National Program) at the "Congreso lechero" in Costa Rica:
https://prezi.com/aijejwvudaz1/livestock-nama-in-costa-rica/

References: Final report ENDGBC Costa Rica 2015-2034.
http://www.mag.go.cr/bibliotecavirtual/a00366.pdf
Summary of the ENDGBC Costa Rica:
http://www.mag.go.cr/bibliotecavirtual/a00367.pdf
NAMA Livestock Costa Rica 2015.
http://www.mag.go.cr/bibliotecavirtual/a00368.pdf
Presentation of Dr. Rolando Barahona (Colombian National Program) at the " Congreso lechero" in Costa Rica:
https://prezi.com/aijejwvudaz1/livestock-nama-in-costa-rica/
Project to Support the Implementation of NAMAs in Costa Rica: This is a project funded by the CIAT- CCAFS, managed by FITTACORI and implemented by MAG, in order to develop activities contributing to the mitigation and adaptation of the agricultural sector to climate change. (http://namanews.org/news/2015/03/12/costa-ricaleads-the-way-towards-sustainable-livestock-management/)

The primary 2019 outcome indicator that this case study is contributing to:
FP3 Indicator: # 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.
FP3 Indicator: # millions of hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #4

Title: Colombian government registers in the UNFCCC a NAMA Information Note developed with LivestockPlus (Joint LivestockPlus).

Outcome statement: A NAMA Information Note (NINO) for Livestock sector in Colombia was submitted to the UNFCCC in September 2015. The NINO was developed by Colombian Ministry of Agriculture and Rural Development (MADR) and Ministry of Environment and Sustainable Development (MADS) in collaboration with partners including CIAT, CIPAV and FEDEGAN. The document aims to identify mitigation actions feasible under specific conditions of livestock production areas in Colombia, estimating physical and financial requirements for design and implementation of the NAMA.

Research Outputs: Determinación del potencial de reducciones de gases de efecto invernadero en sistemas silvopastoriles en el proyecto Análisis de Sistemas Productivos en Colombia"). Annex I of the NINO
MADR-CIAT-GASA. (2014). Potencial de mitigación de 4 cultivos frutales. Bogotá: MADR-CIAT.
MADR-CIPAV-CIAT. (2014). Carbono-eficiencia de sistemas silvopastoriles y pasturas mejoradas. Bogotá: MADR
Fisher etal. 1994. Nature 371: 236-238.
Rao et al. 2015. Tropical Grasslands–Forrajes Tropicales 3: 59-82.
Rao et al. 2014. Rural21 4: 12-15.
Rudel et al. 2015. Ambio 44: 685-693.
Subbarao et al. 2009. Proceedings of the National Academy of Sciences (USA) 106: 17302-17307.
Jarvis, etal. 2010. Journal for Nature Conservation 18:180–188.

Research Partners: Center for Research in Sustainable Farming Systems (CIPAV)
CCAFS

Activities that contributed to the outcome: CIAT co-authored the NINO, with major contributions to the section on improved pastures (eco-efficient practices).
The LivestockPlus team supported the Colombian ministry of agriculture and rural development by providing estimates on the mitigation potential of technical alternatives related to pasture based production systems in different agroecosystems. CIAT and partners provided data on carbons stocks and emissions from intensive silvopastoral systems.
The team participated in the event on exchanging experiences from Colombia and Costa Rica organized by the Colombian LEDS, UNDP and FEDEGAN in June 2015.
Interaction among multistakeholders in several meetings contributed to the design of NINO.

Non-research Partners: Ministry of Agriculture and Rural Development (MADR)
Ministry of Environment and Sustainable Development (MADS)
Center for Research in Sustainable Farming Systems (CIPAV)
Federación Colombiana de Ganaderos (FEDEGAN)

Output Users: Ministry of Agriculture and Rural Development, Colombia
Ministry of Environment and Sustainable Development, Colombia
Center for Research in Sustainable Farming Systems (CIPAV)

How the output was used: CIAT co-authored the NINO.
Based also on CIAT science, the NINO proposes the implementation of silvopastoral systems, intensive silvopastoral systems and eco-efficient practices (improved pastures) in conventional pastoral systems; identifies financing mechanisms for the project and outlines an MRV system.
Annex I of NINO is based on CIAT science.

Evidence of the outcome: NINO -section H on UNFCC website:
http://www4.unfccc.int/sites/nama/_layouts/un/fccc/nama/NamaSeekingSupportForPreparation.aspx?ID=150&viewOnly=1

CIAT is one of the authors of the NINO; Annex I of the NINO is a full study by CIAT

Citations:
MADR-CIAT-GASA. 2014
MADR-CIPAV-CIAT. 2014
Fisher, etal 1994

Rao etal 2015

Jarvis, etal 2010
Livestock roundtable Colombia: http://mesaganaderiasoste.wix.com/principal

References: NINO: NINO -section H on UNFCC website: http://www4.unfccc.int/sites/nama/_layouts/un/fccc/nama/NamaSeekingSupportForPreparation.aspx?ID=150&viewOnly=1
MADR-CIAT-GASA. (2014). Potencial de mitigación de 4 cultivos frutales. Bogotá: MADR-CIAT.
MADR-CIPAV-CIAT. (2014). Carbono-eficiencia de sistemas silvopastoriles y pasturas mejoradas. Bogotá: MADR
Fisher, M. J., I. M. Rao, M. A. Ayarza, C. E. Lascano, J. I. Sanz, R. J. Thomas and R. R. Vera 1994 Carbon storage by introduced deep-rooted grasses in the south American savannas. Nature 371: 236-238.
Rao, I., Peters, M., …….Rudel, T.Castro, A., Shultze, R., White, D., Fisher, M., Hyman, G. (2015). LivestockPlus: The sustainable intensification of forage-based agricultural systems to improve livelihoods and ecosystem services in the tropics. Tropical Grasslands, 3: 59-82.
Jarvis, A., Touval, J. L., Castro, M., Sotomayor, L. and Graham, G. 2010. Assessment of threats to ecosystems in South America. Journal for Nature Conservation 18:180–188.
Livestock roundtable Colombia: http://mesaganaderiasoste.wix.com/principal

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies
FP3 Indicator: # 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.
FP3 Indicator: # millions of hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #5

Title: A WB high level report to support Nicaraguan Government investment is informed by CIAT/CCAFS science

Outcome statement: 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. A CIAT/CCAFS CSA Country Profile for Nicaragua was developed as a supporting document to the report, which also includes other CIAT/CCAFS scientific inputs on agricultural sector, climate projections and GHG emissions are included in the report.This outcome also supports FP1 outcomes.

Research Outputs: World Bank; CIAT. 2015. Climate-Smart Agriculture in Nicaragua. CSA Country Profiles for Africa, Asia, and Latin America and the Caribbean Series. Washington D.C.: The World Bank Group.
Baca et al. 2011. “Vulnerabilidad y estrategias de Adaptacion al cambio climático en los medios de vida de las familias de Nicaragua.” CIAT, Nicaragua.
CCAFS. 2013. “State of the art in climate change, agriculture and food security in Nicaragua.” (CCAFS). Mimeograph.
CIAT. 2015. Climate Smart Agriculture Profile for Nicaragua. Background Paper to: “Agriculture in Nicaragua: Performance, Duality and Challenges”. CIAT. Nicaragua.
Gourdji, etal. 2015. “Historical climate trends, deforestation, and maize and bean yields in Nicaragua.” Agricultural and Forest Meteorology 200: 270-281.
Läderach, etal. 2012. “Predicting the impact of climate change on areas of cacao cultivation in Nicaragua.” CIAT. Nicaragua
Martínez Valle. 2015. “Profile of Nicaragua with respect to Climate-smart Agriculture.” Background Paper to: “Agriculture in Nicaragua: Performance, Duality and Challenges”. World Bank. Nicaragua.

Research Partners: CCAFS

Activities that contributed to the outcome: In 2014, the Central Bank of Nicaragua (BCN) asked WB to conduct a "study of the agricultural sector in Nicaragua". The WB team sought CIAT's support as a scientific partner. CIAT scientists participated in meetings and accompanied the WB in its liaison function with the Cooperation board. The board is a communication mechanism for WB, IFAD, SDC; IICA, WFP, Canadian Cooperation, EU, FAO, CATIE and CIAT. CIAT scientists also presented the CSA country profile in meetings with national stakeholders (BCN, MHCP, MAG, MEFCCA, MARENA, MIFIC, INETER, INTA, INIDE and BFP) and international donors/cooperation. After a series of meetings, a final document consolidating different inputs was prepared by the WB. CIAT/CCAFS contributed with analysis of climate risks for agriculture and a CSA Country Profile. Results were presented at regional level at meetings of Technical Group on Integrated Risk Management and Climate Change (GTGIRCC) of the Agricultural Council in El Salvador.

Non-research Partners: World Bank

Output Users: WB
Central bank Nicaragua
Sistema Nacional Producción, Consumo y Comercio
Ministerio Hacienda y Crédito Público
Ministerio Agricultura y Ganadería
Ministerio Economía (MEFCCA)
Ministerio Ambiente y Recursos Naturales
Ministerio Fomento, Industria y Comercio
Instituto Nicaragüense Estudios Territoriales
Instituto Nicaragüense Tecnología Agropecuaria
Instituto Nicaraguense Información de Desarrollo
Banco de Fomento Produzcamos
SDC

How the output was used: The WB report uses results of the CSA Country Profile for Nicaragua and from several studies including Baca etal.2011; Läderach etal.2012, Martínez Valle,2015; Gourdji et al.2015; and CCAFS.2013. The report is the first step for negotiation between WB and Government to prioritize investments and definition of government strategies and plans.

Evidence of the outcome: World Bank. 2015. Agriculture in Nicaragua: Performance, Challenges, and Options:
• p.IV
• p.9: Figure 2.1
• p.22: Figure 3.2
• p.24: Figure 3.4
• p.62: ..CGIAR…CIAT…have...developed conceptual frameworks.
• P.68: Figure 6.7
• p.64, 66: Gourdji etal.2015
• p.66: Läderach etal2012
• p.37: Table 4.6
WB; CIAT. 2015: https://cgspace.cgiar.org/rest/bitstreams/64623/retrieve

References: World Bank. 2015. Agriculture in Nicaragua: Performance, Challenges, and Options. World Bank, Managua, Nicaragua.
World Bank; CIAT. 2015. Climate-Smart Agriculture in Nicaragua. CSA Country Profiles for Africa, Asia, and Latin America and the Caribbean Series. The World Bank Group.
https://cgspace.cgiar.org/rest/bitstreams/64623/retrieve
Baca, M., et al. 2011. “Vulnerabilidad y estrategias de Adaptation al cambio climático en los medios de vida de las familias de Nicaragua.” (CIAT), Nicaragua.
CCAFS. 2013. “State of the art in climate change, agriculture and food security in Nicaragua.” (CCAFS). Mimeograph.
CIAT. 2015. Climate Smart Agriculture Profile for Nicaragua. (CIAT).
Gourdji, S., P. et al. 2015. Agricultural and Forest Meteorology 200: 270-281.
Läderach, P., et al. 2012. “Predicting the impact of climate change on areas of cacao cultivation in Nicaragua.” (CIAT)
Martínez Valle, A. 2015. “Profile of Nicaragua with respect to Climate-smart Agriculture.” Background Paper to: “Agriculture in Nicaragua: Performance, Duality and Challenges”. World Bank

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Final Output - P152101 2016-01-11 17 20.pdf

Project: P8 - (IRRI-SEA) Policy Information and Response Platform on Climate Change and Rice in ASEAN and its Member Countries (PIRCCA)

Start date (dd-MM-yyyy)	01-03-2014	**End date (dd-MM-yyyy)**	31-12-2017
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	IRRI - International Rice Research Institute - Philippines	**Project leader**	Pede, Valerien <v.pede@irri.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Mapping stakeholder influence using Netmap approach: Case of Bac Lieu province in Vietnam

Outcome statement: Through the Net-Map activity, the PIRCCA project aimed to identify key stakeholders, their links, goals and their influence on the success of a reform and be able to generate actionable insights to address challenges. The Netmap approach will allow the PIRCCA project to identify and understand the existing engagement mechanisms. Understanding these engagement mechanisms will facilitate the mainstreaming of nationally promulgated climate policies at the local level.

Research Outputs: A report has been developed to summarize the findings of the Netmap activity in Vietnam's Bac Lieu province.

Research Partners: Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD

Activities that contributed to the outcome: The Netmap activity was conducted in Bac Lieu province in Vietnam on August 27, 2015. The activity was facilitated by the PIRCCA team and IPSARD. The participants were from the following institutions: Rural development Division ; Planning Division ; Technical Division; Irrigation Division; Infrastructure Division; Plant Protection Division; Breeding Center; Management Center for Irrigation System; Agriculture Extension Center.

Two main questions were at the center of the activity:
1. Who influences the successful policy formulation for the adoption of short-term duration rice varieties for the rice-shrimp farming system in Bac Lieu province?
2. Who influences the successful adoption of short-term duration rice varieties for the rice-shrimp farming system in Bac Lieu province?

Non-research Partners: An Lam Vien Agriculture Joint Stock Company

Output Users: Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD

PIRCCA

How the output was used: The output of the Netmap activity is the stakeholder influence mapping. This output shall be used by IPSARD, the PIRCCA team and also other stakeholders in designing appropriate engagement strategies for policy influence at the national and local levels.

Evidence of the outcome: Influential stakeholders and potential engagement mechanisms are now being explored. For instance, in the case of policies to promote short duration varieties to support rice-shrimp farming, the net-map activity revealed that the Provincial People's Committee (PPC) plays a crucial role in the local government structure.

References: The report summarizing the the findings from the Net-map activity is currently under editing.

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #2

Title: THE RICE-SHRIMP FARMING PRACTICE IN BAC LIÊU PROVINCE, VIETNAM

Outcome statement: The rice-shrimp practice in salinity prone areas represents a sustainable climate change adaptation practice. The presence of shrimps in the farm provides additional fertilizers for the paddy while contributing to the reduction of pests which harm the rice. Cultivating rice also helps change the aquatic and soil environment by increasing natural food sources stemmed from insects, natural enemies and many other microorganisms in water and soil for shrimp as well as reduce diseases in shrimp.

Research Outputs: A report has been written on the practice of rice-shrimp system in Bac Lieu province in Vietnam. The report highlights: the history of rice-shrimp farming in Bac Lieu; the economic, social and environmental efficiency of rice-shrimp farming, as well as its benefits and disadvantages.

Research Partners: Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD

Crops Department, DARD

Activities that contributed to the outcome: Litterature review, field visits and interviews were used to document the rice-shrimp model in Bac Lieu.

Non-research Partners: An Lam Vien Agriculture Joint Stock Company

Output Users: Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD
PIRCCA
MARD
MONRE
An Lam Vien Agriculture Joint Stock Company

How the output was used: The output serves as evidence for climate smart practices that was considered in formulating climate policies in rice production

Evidence of the outcome: The rice-shrimp model has been highlighted in the proposal for restructuring of rice sector as an example of good practices that can be promoted in stress prone areas.

References: The report on the rice-shrimp model in Bac Lieu is currently under review.

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #3

Title: EFFECTS OF BIOGRO AND N RATE ON GROWTH AND YIELD IN RICE-SHRIMP SYSTEM

Outcome statement: BioGro, a PGP bio-fertilizer stimulates the rice plant to produce more roots, more tillers, makes the stem become thicker and stronger and also improves the P uptake due to high P dissolving capacity. This practice helps improve farmers' income and environmental health for agro-ecosystem sustainability. The technique was applied in the rice-shrimp system in Sóc Trang. Farmers produce rice crops following a shrimp crop and do not farm shrimp and rice simultaneously which create suitable conditions for conducting the experiment.

Research Outputs: Data from the first season experiment are available and have been analyzed. The experiment is expected to be continued for two more seasons.

Research Partners: Can Tho University
Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD

Activities that contributed to the outcome: The experiment is comprised of two factors.
Factor A is the Biogro rate: 0 and 50 kg/ha
Factor B is the N rate: 0, 70, 105 and 140 kg N/ha

The experiment was conducted in a Factorial Complete Block (FCB) design comprising of 8 treatments. The treatments were laid out in a split-plot design with Biogro as the main plot and N rate as the sub plots, replicated four times.
BioGro bio-fertilizer was supplied in the powder form, 50 kg/ha. The product includes Pseudomonas fluorescence 1.0 x 106 CFU/g, Bacillus subtilis 1.0 x 106 CFU/g, Bacillus spp 1.0 x 106 CFU/g, Yeast 1.0 x 106 CFU/g. The inoculant was split into two applications: 25% mixing with the soak seeds at broadcasting and 75% applied at 12-15 days after sowing. P and K was applied at the same rates (40 P2O5 and 60 K2O) for all treatments.

Non-research Partners: Sóc Trang Department of Agriculture and Rural Development
Sóc Trang Seed Center
Institute of Agricultural Science for Southern Viet Nam

Output Users: Can Tho University
Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD
PIRCCA
MONRE
MARD
Sóc Trang Department of Agriculture and Rural Development
Sóc Trang Seed Center
Institute of Agricultural Science for Southern Viet Nam

How the output was used: Data from the first season experiment have been analyzed. In order to make tangible recommendations, more replications are needed. Once all results have been analyzed, the PIRCCA team expects to communicate them through publications that can lead to policy influence.

Evidence of the outcome: A draft report on the first season experiment is currently being edited.

References: The report is still in draft form.

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #4

Title: Using suitable seeds to cope with climate change challenges in Soc Trang

Outcome statement: The purpose of the case study is to identify high quality and high value added seed varieties which are suitable for the local natural conditions and can adapt to climate change challenges.

Research Outputs: A report has been written on the case study. It summarizes the experiments, the key findings and provides some recommendations.

Research Partners: Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD

Activities that contributed to the outcome: The experiments were done in two seed farms located in Soc Trang, namely, Ke Sach and Long Phu. Selected potential seeds were distributed to the farmers in several districts of Soc Trang for the experiment. Basing from the feedbacks and assessments of the seed varieties from the farmers, the Soc Trang Seed Center selected the identified well-adapted seeds. A suitable production process of these seeds was established along with the conduct of trainings for the farmers. The utilization of the well-adapted seeds was upscaled and was then assessed again. Seeds were sourced from farmers who propagated their own seeds or through purchasing of the seeds from the Center.

Non-research Partners: Soc Trang Department of Agriculture and Rural Development;
People's Committee of districts, cities, villages
Soc Trang Seed Center

Output Users: Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD
PIRCCA
MARD
MONRE
Soc Trang Department of Agriculture and Rural Development;
People's Committee of districts, cities, villages
Soc Trang Seed Center

How the output was used: The identification of suitable rice varieties to cope with the various challenges of climate change is essential for climate policy formulation. The identified high quality and special rice seeds, drought-tolerant and salinity-tolerant varieties have been discussed in the proposal for the restructuring of the rice sector.

Evidence of the outcome: The draft report summarizing the key findings is currently being edited.

References: The report is still in draft form. References are not yet available.

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #5

Title: CASE STUDIES ON WHY AWD TECHNOLOGY IS NOT WIDELY ADOPTED IN AYEYARWADDY DELTA

Outcome statement: The objectives of this case study are:
a) To identify the conditions that affected the adoption of AWD technology in the IRRI project areas in the Ayeyarwaddy Delta;
b) To describe how these conditions affect the farmers' willingness to adopt AWD technology in each township;
c) To identify the lessons learned from adopting the AWD technology and its implications for policy and development project planning.

Research Outputs: The practice of Alternate Wetting and Drying (AWD) can reduce methane emissions from rice cultivation, while providing water-saving and cost-saving co-benefits. However, AWD is not yet widely practiced in Myanmar. The challenge is to understand why AWD is not being widely adopted; to identify physical, economic, and/or institutional barriers; and to make recommendations for policies, planning, and implementation of development projects. This case study was conducted by Yezin Agriculture University (YAU) in 33 townships where AWD has been promoted. The output of the case study is a report that summarizes the key findings.

Research Partners: Yezin Agriculture University (YAU)

Activities that contributed to the outcome: Yezin Agricultural University conducted interviews with farmers who participated in the trials to learn if they continued to practice the AWD technology on their own. The 33 AWD demonstration sites are located in the Townships of Bogalay (10 sites), Mawlamyinegyun (11 sites) and Labutta (12 sites) within the Ayeyarwaddy Delta Region. The AWD trials were implemented in fresh water, brackish water and saline water environments. Focus group discussion and structured interviews with questionnaire were used to elicit information from the farmers.

Non-research Partners: The Department of Agriculture and several NGO partners

Output Users: Yezin Agriculture University (YAU)
PIRCCA
Department of Agriculture MOAI

How the output was used: The case study provides some crucial information on the status of AWD in rice production in Myanmar. The findings could be considered in the formulation of policies on GHG mitigation. Findings from this case study were used in drafting the UNFCCC Subsidiary Body for Scientific and Technological Advice 44.

Evidence of the outcome: The draft report on the case study is currently being edited. The UNFCCC Subsidiary Body for Scientific and Technological Advice report for Myanmar is also being drafted with the help of PIRCCA team

References: The reports are still in draft format

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #6

Title: Gender Differences in Climate Change Perception and Adaptation Strategies in Vietnam's Mekong River Delta

Outcome statement: This report focuses on the results of a survey conducted on climate change perception and adaptation strategies of male and female farmers in three provinces in Vietnam: An Giang, Bac Lieu, and Tra Vihn. The survey seeks to gather information on current climate change perceptions and adaptation strategies and gaps between the identified male and female respondents. The findings of the survey are instrumental in PIRCCA's efforts in influencing the crafting of gender-responsive food security policies for Vietnam.

Research Outputs: This case study has been published in the form of a report on the CCAFS website

Research Partners: Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD

Activities that contributed to the outcome: The focus of this study was to first gather information on climate change perceptions and adaptation strategies in Vietnam. Second, this survey was implemented to look for information gaps, perception gaps, or differences in adaptation strategies between men and women. The survey design was such that the husband and the wife of a household were interviewed separately on topics such as climate variability, climate stress and resulting changes, climate stress and impacts, and adaptation and coping strategies. In total, 214 households were interviewed. The surveys were carried out by the Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD). The surveys were conducted in seven districts located in three provinces: An Giang Province (n = 90), Bac Lieu Province (n = 64), and Tra Vinh Province (n = 60).

Non-research Partners: There was no non-research partners involved in this case study

Output Users: Institute of Policy and Strategy for Agriculture and Rural Development - IPSARD
PIRCCA
MARD
MONRE

How the output was used: Findings from this report were used in drafting the The UNFCCC Subsidiary Body for Scientific and Technological Advice report for Vietnam. The PIRCCA team assisted MARD in drafting the proposal.

Evidence of the outcome: The Subsidiary Body for Scientific and Technological Advice report has been submitted to the UNFCCC.

References: The gender analysis report is available on CCFAS website at https://ccafs.cgiar.org/publications/gender-differences-climate-change-perception-and-adaptation-strategies-case-three#.Vs7Myvl96M8

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Gender report Vietnam.pdf

Outcome case study #7

Title: Gender Differences in Climate Change Perception and Adaptation Strategies in Myanmar Ayeyawardy region

Outcome statement: This study seeks to gather information on current climate change perceptions and adaptation strategies and gaps between the identified male and female respondents. The findings of the survey are instrumental in PIRCCA's efforts in influencing the crafting of gender-responsive food security policies for Myanmar.

Research Outputs: The gender dis-aggregated data are available and currently being analyzed.

Research Partners: Yezin Agriculture University (YAU)

Activities that contributed to the outcome: The focus of this study was to first gather information on climate change perceptions and adaptation strategies in Vietnam. Second, this survey was implemented to look for information gaps, perception gaps, or differences in adaptation strategies between men and women. The survey design was such that the husband and the wife of a household were interviewed separately on topics such as climate variability, climate stress and resulting changes, climate stress and impacts, and adaptation and coping strategies. In total, 89 households were interviewed. The surveys were carried out by Yezin Agriculture University (YAU) in 3 regions: Bago (n=28), Mandalay (n=2),, Taungoo (n=33), and Yamethin (n=26).

Non-research Partners: There was no non-research partners involved in this study

Output Users: YAU
PIRCCA
Various ministries

How the output was used: Findings from this study were used in drafting the The UNFCCC Subsidiary Body for Scientific and Technological Advice report for Myanmar

Evidence of the outcome: The UNFCCC Subsidiary Body for Scientific and Technological Advice report for Myanmar is currently being drafted with the help of the PIRCCA team

References: The report of this case study is currently being drafted

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P9 - LivestockPlus: Supporting low emissions development planning in the Latin American cattle sector

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP LAM - Latin America Region	**Mgmt. liaison contact**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Lead organization	CIAT - Centro Internacional de Agricultura Tropical - Colombia	**Project leader**	Rao, Idupulapati <i.rao@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Colombian government registers in UNFCCC a NAMA Information Note (NINO) developed with LivestockPlus (Joint FP4-LAM).

Outcome statement: A NAMA Information Note (NINO) for Livestock sector in Colombia was submitted to the UNFCCC in September 2015. The NINO was developed by Colombian Ministry of Agriculture and Rural Development (MADR) and Ministry of Environment and Sustainable Development (MADS) in collaboration with partners including CIAT, CIPAV and FEDEGAN. The document aims to identify mitigation actions feasible under specific conditions of livestock production areas in Colombia, estimating physical and financial requirements for design and implementation of the NAMA.

Research Outputs: Determinación del potencial de reducciones de gases de efecto invernadero en sistemas silvopastoriles en el proyecto Análisis de Sistemas Productivos en Colombia"). Annex I of the NINO
MADR-CIAT-GASA. (2014). Potencial de mitigación de 4 cultivos frutales. Bogotá: MADR-CIAT.
MADR-CIPAV-CIAT. (2014). Carbono-eficiencia de sistemas silvopastoriles y pasturas mejoradas. Bogotá: MADR
Fisher et al. 1994. Nature 371: 236-238.
Rao et al. 2015. Tropical Grasslands–Forrajes Tropicales 3: 59-82.
Rao et al. 2014. Rural21 4: 12-15.
Rudel et al. 2015. Ambio 44: 685-693.
Subbarao et al. 2009. Proceedings of the National Academy of Sciences (USA) 106: 17302-17307.
Jarvis et al. 2010. Journal for Nature Conservation 18:180–188.

Research Partners: Center for Research in Sustainable Farming Systems (CIPAV)
CCAFS

Activities that contributed to the outcome: CIAT co-authored the NINO, with major contributions to the section on improved pastures (eco-efficient practices).
The LivestockPlus team supported the Colombian Ministry of Agriculture and Rural Development by providing estimates on the mitigation potential of technical alternatives related to pasture based production systems in different agroecosystems. CIAT and partners provided data on carbons stocks and emissions from intensive silvopastoral systems.
The team participated in the event on exchanging experiences from Colombia and Costa Rica organized by the Colombian LEDS, UNDP and FEDEGAN in June 2015.
Interaction among multistakeholders in several meetings contributed to the design of NINO.

Non-research Partners: Ministry of Agriculture and Rural Development (MADR)
Ministry of Environment and Sustainable Development (MADS)
Center for Research in Sustainable Farming Systems (CIPAV)
Federación Colombiana de Ganaderos (FEDEGAN)

Output Users: Ministry of Agriculture and Rural Development (MADR), Colombia
Ministry of Environment and Sustainable Development (MADS), Colombia
Center for Research in Sustainable Farming Systems (CIPAV)

How the output was used: CIAT co-authored the NINO.
Based also on CIAT science, the NINO proposes the implementation of silvopastoral systems, intensive silvopastoral systems and eco-efficient practices (improved pastures) in conventional pastoral systems; identifies financing mechanisms for the project and outlines an MRV system.
Annex I of NINO is based on CIAT science.

Evidence of the outcome: NINO -section H on UNFCC website:
http://www4.unfccc.int/sites/nama/_layouts/un/fccc/nama/NamaSeekingSupportForPreparation.aspx?ID=150&viewOnly=1

CIAT is one of the authors of the NINO; Annex I of the NINO is a full study by CIAT

Citations:
MADR-CIAT-GASA. 2014
MADR-CIPAV-CIAT. 2014
Fisher et al. 1994
Rao et al. 2015
Jarvis et al. 2010

References: NINO: NINO -section H on UNFCC website:
http://www4.unfccc.int/sites/nama/_layouts/un/fccc/nama/NamaSeekingSupportForPreparation.aspx?ID=150&viewOnly=1
MADR-CIAT-GASA. (2014). Potencial de mitigación de 4 cultivos frutales. Bogotá: MADR-CIAT.
MADR-CIPAV-CIAT. (2014). Carbono-eficiencia de sistemas silvopastoriles y pasturas mejoradas. Bogotá: MADR
Fisher, M. J., I. M. Rao, M. A. Ayarza, C. E. Lascano, J. I. Sanz, R. J. Thomas and R. R. Vera 1994 Carbon storage by introduced deep-rooted grasses in the south American savannas. Nature 371: 236-238.
Rao, I., Peters, M., …….Rudel, T. (2015). LivestockPlus: The sustainable intensification of forage-based agricultural systems to improve livelihoods and ecosystem services in the tropics. Tropical Grasslands 3: 59-82.
Jarvis, A., Touval, J. L., Castro, M., Sotomayor, L. and Graham, G. 2010. Assessment of threats to ecosystems in South America. Journal for Nature Conservation 18:180–188.
Livestock roundtable Colombia: http://mesaganaderiasoste.wix.com/principal

The primary 2019 outcome indicator that this case study is contributing to:
FP3 Indicator: # 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.
FP3 Indicator: # millions of hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #2
Title: CIAT-MAG-CATIE collaboration supported the process leading to Low Emission Livestock Strategy Costa Rica (Joint FP4-LAM/FP3-LivestockPlus)
Outcome statement: In 2015, CIAT-MAG-CATIE collaboration supported the final stages of the process of the Low Emission Livestock Strategy (Estrategia Nacional para el Desarrollo de la Ganadería Baja en Carbono, ENDGBC) in Costa Rica, which is the 2015-2034 policy framework for the livestock sector. CIAT-MAG facilitated workshops and supported the development of the Livestock NAMA program support. CIAT-MAG also facilitated regional commissions on livestock, PITTA low carbon livestock research and supported the management of the process.
Research Outputs: The outputs from the CIAT-MAG-CATIE collaboration are: • The First Pasture Congress with sharing of knowledge on pasture management for livestock production (2015), where the National Network of Pastures and Forages was launched. • Action Plan of Livestock NAMA program support with defined role for actors involved • Complementarity of supporting organizations and programs to achieve the concrete objectives of the Livestock NAMA program support. • Summary of actions/lessons learned and systematization of the process • A scoping report on the current state of Livestock NAMA • Official Newsletter of the systematization of the National Low Carbon Livestock Plan • Dissemination in newspapers, blog posts and press conferences.
Research Partners: CCAFS Tropical Agricultural Research and Higher Education Center (CATIE) National Institute of Agricultural Innovation and Technology Transfer (INTA) World Agroforestry Centre (ICRAF)
Activities that contributed to the outcome: The final stages of the EDGBC were supported by CIAT-MAG collaboration, which facilitated a series of workshops, the implementation of regional livestock commissions, and the implementation of the Low Carbon Livestock PITTA (research body). The project also supported the launch of the National Network of Pastures and Forages; the First Pasture Congress to share knowledge on pasture management practices for sustainable livestock production. The project trained Livestock Scientist, Mr. Diego Tovar from CATIE and two researchers from INTA on GHG quantification for the Livestock NAMA. CIAT has complemented the instrument for the baseline survey (to be applied in 1,000 farms in Costa Rica) with gender focused questions.
Non-research Partners: Ministry of Agriculture and Livestock (MAG) of Costa Rica
Output Users: Ministry of Agriculture and Livestock (MAG) of Costa Rica Mesa Ganadera (Livestock roundtable) PITTA Ganaderia Baja en Carbono (Research and Agricultural Technology Transfer Programme) Comisión Nacional de Ganadería (National livestock committee) Comisiones Regionales de Ganaderia (Regional livestock committees) CAN (Consejo Agropecuario Nacional) (National agriculture and livestock council)
How the output was used: The collaboration supported the CAN reach agreement which will support the future process of implementation of the EDGBC. The collaboration also supported a priority line of action in the EDGBC, which is the inception of the National Network of Pastures and Forages.

Evidence of the outcome: Final report ENDGBC Costa Rica 2015-2034.
http://www.mag.go.cr/bibliotecavirtual/a00366.pdf
Summary of the ENDGBC Costa Rica:
http://www.mag.go.cr/bibliotecavirtual/a00367.pdf
NAMA Livestock Costa Rica 2015.
http://www.mag.go.cr/bibliotecavirtual/a00368.pdf
Presentation of Dr. Rolando Barahona (Colombian National Program) at the "Congreso lechero" in Costa Rica:
https://prezi.com/aijejwvudaz1/livestock-nama-in-costa-rica/

References: Final report ENDGBC Costa Rica 2015-2034.
http://www.mag.go.cr/bibliotecavirtual/a00366.pdf
Summary of the ENDGBC Costa Rica:
http://www.mag.go.cr/bibliotecavirtual/a00367.pdf
NAMA Livestock Costa Rica 2015.
http://www.mag.go.cr/bibliotecavirtual/a00368.pdf
Presentation of Dr. Rolando Barahona (Colombian National Program) at the " Congreso lechero" in Costa Rica:
https://prezi.com/aijejwvudaz1/livestock-nama-in-costa-rica/
Project to Support the Implementation of NAMAs in Costa Rica: This is a project funded by the CIAT- CCAFS, managed by FITTACORI and implemented by MAG, in order to develop activities contributing to the mitigation and adaptation of the agricultural sector to climate change. (http://namanews.org/news/2015/03/12/costa-rica-leads-the-way-towards-sustainable-livestock-management/)

The primary 2019 outcome indicator that this case study is contributing to:
FP3 Indicator: # 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.
FP3 Indicator: # millions of hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P12 - ILRI Mitigation in livestock systems and LED pathways

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP EA - East Africa Region	**Mgmt. liaison contact**	Kinyangi, James <j.kinyangi@cgiar.org>
Lead organization	ILRI - International Livestock Research Institute - Kenya	**Project leader**	Ericksen, Polly <p.ericksen@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: Outreach to Kenya Ministry Environment and Agriculture Climate Change Staff
Outcome statement: The Climate Change Units of the Ministries of Environment and Agriculture recognise the role of the research CIFOR and ILRI are conducting on options for mitigating the contribution of livestock production systems to climate change.
Research Outputs: First is the TargetCSA tool developed by CIFOR (M. Rufino) with support from CCAFS East Africa. Target CSA allows national partners to make informed choices about where to locate CSA interventions, based upon a range of geographic, biophysical, and economic data. Second is the data and products from the SAMPLES work conducted by ILRI, CIFOR and ICRAF under Flagship 3 for the past 3 years, highlighting the importance of collecting in situ data from African systems, and designing and piloting best practice for such data collection. Third are the as yet preliminary results of emissions differences from changed manure management and livestock feeding practices.
Research Partners: The primary research partners are the International Livestock Research Institute, The Centre for International Forestry Research, the World Agroforestry Centre, the Karsruhe Institute of Technology and Institute of Meteorology and Climate Research, Garmisch-Partenkirchen (Germany).
Activities that contributed to the outcome: 1. March 5, 2015 visit to ILRI hosted Mazingira Lab by Min of Environment Climate Change Unit Staff and other key stakeholders. 2. Continuous support by CIFOR and ILRI to the CC Unit as they formulated their CSA strategy and included agriculture in their INDC. 3. Request to CC unit of the Ministry of Agriculture to formally support the IFAD grant to ILRI / CIFOR project on "Greening Livestock", which will inform the ongoing Kenya NAMA, which includes the Dairy Sector. 4. Participation in the Unique Forestry stakeholder consultation with the Ministry of Agriculture to discuss the dairy NAMA.
Non-research Partners: Unique Forestry, which has been commissioned by CCAFS FP 3 to support the development of a Dairy NAMA in Kenya.
Output Users: The output users are members of the Climate Change Unit within the Ministry of Environment, and the CC Unit within the Ministry of Agriculture.
How the output was used: The outputs have been used to embed agriculture in the Kenya INDC, and to include the dairy sector in the NAMA that is under development.

Evidence of the outcome: Letters from the Ministry staff are included in an annex. A blog (see below) covers the March 5 visit. CCAFS EA wrote an outcome story about the Kenya INDC (see below).

References: March 5 visit: http://blog.cifor.org/27454/in-an-important-first-for-africa-climate-data-made-in-kenya?fnl=en
INDC: https://cgspace.cgiar.org/bitstream/handle/10568/67906/07outcomecase.pdf?sequence=6
Journal papers reported under the deliverable.s

The primary 2019 outcome indicator that this case study is contributing to:
FP3 Indicator: # 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.

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: outcome annex.zip

Project: P20 - Piloting and upscaling an innovative underground approach for mitigating urban floods and improving rural water security in South Asia

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP SAs - South Asia Region	**Mgmt. liaison contact**	Aggarwal, Pramod <P.K.Aggarwal@cgiar.org>
Lead organization	IWMI - International Water Management Institute - Sri Lanka	**Project leader**	Pavelic, Paul <p.pavelic@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: New underground solutions mitigating water-related disasters and providing new models for CSA in the Ganges

Outcome statement: Catastrophic seasonal floods and irrigation water deficits/groundwater depletion are being simultaneously addressed in the trouble-spots of the Ganges Basin through a novel 'underground' solution (UTFI). Hitherto unconsidered, UTFI is becoming gaining the attention of Indian policy makers as a new approach to water management and CSA.

Research Outputs: Bird, J. et al. (2016) Adapting to Climate Variability and Change in India. In: Water Security, Climate Change and Sustainable Development, [Editors: Biswas, A.K. & Tortajada, C.], Springer Singapore, pp.41-63.
K, Brindha and Pavelic, P. (2016) Identifying priority watersheds to mitigate flood and drought impacts by novel conjunctive water use management strategies. Environmental Earth Sciences (forthcoming).
Pavelic, P. et al. (2012) Balancing-out floods and droughts: Opportunities to utilize floodwater harvesting and groundwater storage for agricultural development in Thailand. Journal of Hydrology 470–471:55–64.
Pavelic P. et al. (2015) Controlling floods and droughts via underground storage: From concept to pilot implementation in the Ganges Basin. IWMI Research Report No 165.
Smakhtin, V., et al. (2015) Managing water variability, from floods to droughts. Crowdsourced Science Brief for the Global Sustainable Development Report 2015.
https://sustainabledevelopment.un.org/content/documents/629976-Smakhtin-Managing%20water%20variability,%20from%20floods%20to%20droughts.pdf

Research Partners: International Water Management Institute (Pavelic P., Brindha K., Amarnath G., Eriyagama N., Mutuwatte L., Smakhtin V., Gangopadhyay P., Malik R.P.S., Mishra A., Sharma B.R., Hanjra M.A., Nair, N.); Livelihoods and Natural Resources Institute (Reddy, V.R., Rout, S.); Central Soil Salinity Research Institute (Mishra V.K., Verma C.L., Sharma, N.); Krishi Vigyan Kendras, Rampur District (Kant, L); The Energy and Resources Institute (Mini, G., Anshuman, Grover, S.); IFPRI (Xie, H., Ringler, C.)

Activities that contributed to the outcome: Detailed technical investigations, stakeholder engagement and communication activities have led to the first operational UTFI interventions at the pilot scale in the state of Uttar Pradesh, India. A detailed proof of concept (technical, economic, gender/social, institutional) is underway along with impact assessments. This interaction and field inspection have attracted excellent support from the highest officials within the District Rural Development Agency of Rampur District. Plans are under development to expand the pilot many fold and the District administration are working closely with project team to help facilitate this upscaling.

Non-research Partners: UP Departments of Agriculture, Irrigation and Groundwater, Rampur District Administration (including the District Disaster Management Authority), Local Village administration (Panchayat) and community

Output Users: District Rural Development Agency - Rampur District (Mr Amit Kishore, IAS)

How the output was used: The project forums that have been organized form the entry point for discussions. The proposal and implementing plan under development is drawn largely from the scientific outputs of the project.

Evidence of the outcome: A post implementation analysis is underway and will provide an important part of the evidence needed. A successful Open Day and media engagement (see Project Highlight Information section for details).

References: Not applicable

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P21 - Assessing incentives for scaling up mitigation at different stakeholder levels: 'No-regret' mitigation strategies in rice production

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP SEA - South East Asia Region	**Mgmt. liaison contact**	Leocadio, Sebastian <l.sebastian@irri.org>
Lead organization	IRRI - International Rice Research Institute - Philippines	**Project leader**	Wassmann, Reiner <r.wassmann@irri.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Ministries of Vietnam and Bangladesh produce country work plans for scaling out AWD (joint P21/P111)

Outcome statement: Two consortia involving the Ministries of Agriculture for Bangladesh and Vietnam used CCAFS science to produce national workplans for scaling up alternate-wetting-and-drying (AWD). The workplans in each country identified policy engagement strategies, national learning alliances, and assistance platforms through which AWD technical guidance will be channeled. Bangladesh will engage a World Bank US$214 million agricultural technology program involving 1 million farmers. Vietnam will build on contract farming policy and international development programs to reach more than 1 million farmers.

Research Outputs: 1. Climatic AWD suitability maps have been developed for Vietnam and Bangladesh together with national partners indicating which areas are climatically suitable for practicing AWD during what time of the year. Countries will use this information to plan their intervention campaigns. Methodology in 'PLOS-ONE'.
2. The complicated stakeholder network around the question of 'who influences adoption of AWD?' has been analyzed using the participatory NetMap approach. In province-specific workshops bringing together stakeholders, the influence of different actors on the adoption process has been quantified and links between different agents have been identified. The results were used to design targeted engagement and communication strategies. Blog/ report on CCAFS homepage.
3. Opportunities for Practice Change (OPCs) to increase adoption of AWD were identified for Vietnam and Bangladesh in stakeholder workshops to indicate niches where the countries of the CCAC can maximize impact through scaling out AWD. Reports on CCAFS homepage.

Research Partners: Institute for Agricultural Environment (IAE), Vietnam
Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD), Vietnam
Environmental Defense Fund (EDF), Vietnam
Bangladesh Agriculture University (BAU), Bangladesh
Bangladesh Rice Research Institute (BRRI), Bangladesh

Activities that contributed to the outcome: Activities in Vietnam supported the design of enabling environments for implementation of AWD+ on large scales. In different stakeholder workshops under facilitation of the country coordinator and CCAFS project partner, Dr. Vu Duong Quynh from IAE, country-specific opportunities for boosting adoption of AWD+ have been identified. Using the NetMap approach, the CCAC Paddy Rice team identified highly influential actors to engage with to increase AWD+ uptake.

Activities in Bangladesh brought together stakeholders in order to create awareness of the project and support by national partners. Under the facilitation of the country coordinator Prof. Saidur Rahman from BAU, stakeholders also identified country-specific opportunities for large-scale implementation of AWD+ and ways for the Paddy Rice Component to make use of these opportunities.

The CCAC builds further scale-out programs on results from these activities that have strong national support.

Joint outcome: P111 A425 and P21

Non-research Partners: Directorate for Water Resources (DWR-MARD), Vietnam
Department for Agricultural Extension (DAE-MoA), Bangladesh
Rural Development Academy (RDA), Bangladesh

Output Users: The Ministries of Agriculture for Bangladesh and Vietnam. Contact points:
Dr. Le Van Chinh, Directorate for Water Resources (DWR) under the Ministry for Agriculture and Rural Development (MARD), Vietnam
Dr. Tahmina Begum, Department for Agricultural Extension (DAE) under the Ministry for Agriculture (MoA), Bangladesh

How the output was used: The outputs were used to design country-specific work plans to support national initiatives and international development programs in scaling out AWD. GIS-based climatic AWD suitability maps inform the ‘when’ and ‘where’ of intervention campaigns while the stakeholder mapping informs the ‘who’ and ‘how’ and identified OPCs inform the ‘what’.

Evidence of the outcome: http://www.baomoi.com/Giam-phat-thai-khi-nha-kinh-trong-nong-nghiep-bang-tuoi-kho-am-xen-ke/c/15814990.epi
http://dantri.com.vn/xa-hoi/viet-nam-phan-dau-giam-20-phat-thai-khi-nha-kinh-tu-trong-trot-1422668057.htm
http://www.unep.org/ccac/Media/PressReleases/NewCCACAgricultureEffort/tabid/794484/Default.aspx
http://rice-climatechange-research.blogspot.com/2015/05/bangladesh-plans-for-awd-outscaling.htm

References: 1. Nelson A, Wassmann R, Sander BO, Palao LK (2015) Climate-Determined Suitability of the Water Saving Technology "Alternate Wetting and Drying" in Rice Systems: A Scalable Methodology demonstrated for a Province in the Philippines. PLoS ONE 10(12): e0145268. doi: 10.1371/journal.pone.0145268
2. Quynh VD, Sander BO (2015) Workshop report: National planning for phase 1 of the CCAC paddy rice component in Vietnam, CCAFS Workshop Report. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
3. Rahman S, Sander BO (2015) Workshop report: National planning for phase 1 of the CCAC paddy rice component in Bangladesh, CCAFS Workshop Report. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
4. Sander OB, Joven BP. 2014. Report on Phase 1 Planning Meeting of the Paddy Rice Production Component CCAC Agriculture Initiative. CCAFS Report. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

The primary 2019 outcome indicator that this case study is contributing to:
FP3 Indicator: # 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.
FP3 Indicator: # millions of hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation

Explanation of the link between your outcome story and the CCAFS indicators:
Year: 2015
Annexes uploaded: <Not defined>

Project: P25 - Developing, adapting and targeting portfolios of CSA practices for sustainable intensification of smallholder and vulnerable farming systems in South Asia

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP SAs - South Asia Region	**Mgmt. liaison contact**	Aggarwal, Pramod <P.K.Aggarwal@cgiar.org>
Lead organization	CIMMYT - International Maize and Wheat Improvement Center - India	**Project leader**	Jat, ML <m.jat@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Climate-Smart Villages scaled out in Haryana, India

Outcome statement: In India, the State Government of Haryana has launched a program to pilot 500 climate smart villages in the rice-wheat systems districts of the state (https://ccafs.cgiar.org/blog/haryana-says-yes-more-climate-smart-villages#.Vbd8ufmqqkp;

The program is being implemented by Department of Agriculture, Government of Haryana by integrating investments over a range of schemes for which the villages have already been identified through a planning workshop.

Research Outputs: Evidence from Climate-Smart Villages in CIMMYT-CCAFS's pilot sites, assessment and development of portfolio of CSA interventions in Climate-Smart Villages; climate smart agriculture interventions and farmers testimonials, capacity development of stakeholders and policy level dialogues. Peer reviewed publications in high impact Journals.

Research Partners: Key research partners includes national agricultural research organizations (ICAR, State Agriculture Universities), local governments-State Department of AGriculture, Govt of Haryana, farmer cooperatives, private sector partners (IKSL, Kisan Sanchar, Agriculture Insurance Company of India) and CGIAR centers (IFPRI).

Activities that contributed to the outcome: • Generated evidence from Climate-Smart Villages by validating and adapting portfolios of CSA practices and technologies for the predominant agricultural systems by CIMMYT, CCAFS South Asia and other CG centres in close collaboration with State Department of Agriculture, Government of Haryana, CCS Haryana Agricultural University, ICAR institutions (CSSRI), farmer orgfanizations and private sector partners.
• CIMMYT-CCAFS provided knowledge, technological support and developed capacity and raised awareness to design and implement Climate-Smart Villages in Haryana.

Non-research Partners: Department of Agriculture, Government of Haryana, Farmer cooperatives, service providers and private sector (machine manufacturers, small scale seed companies).

Output Users: Department of Agriculture, Government of Haryana; Kisan Sanchar, Farmer cooperatives and service providers

How the output was used: The Department of Agriculture, Government of Haryana, India has taken a policy decision to use the CSV approach of climate-smart agriculture practices portfolio, ICTs for agro-advisories, and technologies in 500 villages in the rice-wheat system dominated districts of the state.

Evidence of the outcome: Letter from the office of the Director General of Agriculture, Department of Agriculture, Government of Haryana regarding implementation of 500 CSVs. To achieve this,evidence of success of CSAPs and CSVs were shared with stakeholders including Government, policy planners through series of events on awareness creation, capacity development and media visits

References: (https://cgspace.cgiar.org/bitstream/handle/10568/67260/Haryana%20letter.pdf?sequence=1)
http://blog.cimmyt.org/?p=10484.
http://blog.cimmyt.org/?p=9902
http://blog.cimmyt.org/climate-smart-villages-the-framework/
http://blog.cimmyt.org/climate-smart-villages-local-adaption-to-promote-climate-smart-agriculture/
Media campaigns:
BBC: http://www.bbc.com/news/business-29257401,
Taipei Times: http://www.taipeitimes.com/News/biz/archives/2014/09/21/2003600182/1;
Voice of America: http://www.voanews.com/content/india-climate-smart-villages-agriculture-technology-farming/2439713.html;
IPS News: http://www.ipsnews.net/2014/09/u-n-pushes-climate-smart-agriculture-but-are-the-farmers-willing-to-change/;
Press Club of India: http://pressclubofindia.co.in/karnal-farmers-get-climate-smart/;
India Climate Dialogue: http://indiaclimatedialogue.net/2014/09/04/climate-smart-villages-show-adapt-make-money/;
The Hindu: http://www.thehindu.com/news/national/other-states/karnal-farmers-get-climatesmart/article6377570.ece;
The Hindu: http://www.thehindu.com/news/national/everyone-has-weather-updates-on-their-fingertips-in-this-village/article6386674.ece

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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
FP1 Indicator: # 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
FP2 Indicator: 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
FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs
FP2 Indicator: Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: DoA, Haryana letter.pdf

Project: P39 - Participatory evaluation and application of climate smart agriculture practices to enhance adaptation to climate change in mixed smallholder systems

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP EA - East Africa Region	**Mgmt. liaison contact**	Kinyangi, James <j.kinyangi@cgiar.org>
Lead organization	CIMMYT - International Maize and Wheat Improvement Center - Mexico	**Project leader**	Misiko, Michael <m.misiko@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: Role of farmer training: lessons for CSA and need for change of paradigm
Outcome statement: Farmers are sustaining new crop varieties through homegrown training models that support business-oriented cooperatives/ Innovation Platforms in Rwanda
Research Outputs: Case study
Research Partners: SIMLESA (CIMMYT)
Activities that contributed to the outcome: SIMLESA Research
Non-research Partners: Innovation Platforms and Cooperatives
Output Users: SIMLESA/ PEACSA
How the output was used: Informed new research - funded by ACIAR (Australia), for full documentation in Rwanda and Kenya
Evidence of the outcome: See attached file
References: See attached narative (in the file)
The primary 2019 outcome indicator that this case study is contributing to: FP1 Indicator: # 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
Explanation of the link between your outcome story and the CCAFS indicators: This is SIMLESA research reported here for lessons, and aimed at shaping PEACSA in future.
Year: 2015
Annexes uploaded: Role of farmer training.docx

Project: P40 - Integrated Agricultural Production and Food Security Forecasting System for East Africa

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP EA - East Africa Region	**Mgmt. liaison contact**	Kinyangi, James <j.kinyangi@cgiar.org>
Lead organization	CIMMYT - International Maize and Wheat Improvement Center - Ethiopia	**Project leader**	Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: ICPAC provides high resolution quantified seasonal forecast to the East Africa region

Outcome statement: The IGAD Climate Prediction and Application Center (ICPAC) used to provide only categorical seasonal climate forecasts (Above Normal, Near Normal and Below Normal) in the past which did not give specific amounts and hence difficult to interpret by the end users. Under the INFAPFS project, ICPAC has been able to generate both seasonal and monthly quantitative forecast outputs, effectively communicate them to the users in the IGAD region and thereby improved the usefulness of climate information in the region.

Research Outputs: Improved seasonal forecasts with quantitative rainfall amounts, downscaled monthly forecasts and dissemination of downscaled forecasts to national and regional stakeholders.

Research Partners: Insititut Geographique du Burundi; Meteorologie Nationale de - 4 - Djibouti; Eritrea Meteorological Services; National Meteorological Agency of Ethiopia; Kenya Meteorological Service; Rwanda Meteorological Agency; South Sudan Meteorological Services; Somalia Meteorological Service; Sudan Meteorological Authority; Tanzania Meteorological Agency and Uganda National Meteorological Authority provide station data and participate in developing the ICPAC's consensus regional forecasts. The International Maize and Wheat Improvement Center (CIMMYT), the International Crops Research Institute in the Semi-Arid Tropics (ICRISAT), Partnership for Economic Policy (PEP), World Food Program (WFP) and Famine Early Warning Systems Network (FEWS NET) are involved in progress review and monitoring meetings.

Activities that contributed to the outcome: The activities that contributed to this outcome include the following:
• identification of the best weather forecast downscaling tools for the Eastern Africa region,
• assembling the required historical data, and production of gridded climatological data set with high spatial and temporal resolution,
• developing tools for data preparation, scripting and making of statistical downscaling using CPT tool,
• improvement of ICPAC weather forecasts through verification of previous seasonal outlooks, identification of gaps for further improvement & production of high resolution 10-day forecasts,
• downscaling of seasonal 2015 forecasts to monthly scales,
• identification of early warning triggers and indicators, and initial forecast downscaling for agricultural applications, and
• dissemination of downscaled forecasts and ago-advisories (GHACOF41)

Non-research Partners: The CGIAR program on Climate Change, Agriculture and Food Security (CCAFS) Institutional Support to African Climate Institutions Project (ISACIP) - which supports the GHACOF process

Output Users: The major users of the outputs are policy makers, national meteorological and hydrological services, national disaster management and food security offices, regional and international Non-Governmental organizations (IGAD, AfDB, UNISDR, WFP, UNDP, FAO, UNOCHA) and agriculturalists.

How the output was used: The national climate services downscale ICPAC's forecasts to give local level weather advisories, DMRFSS and relief agencies use the outputs for national early warning and preparedness planning, and the regional Agriculture and Food Security Working Group use the forecasts to issue quarterly agriculture and food security status briefs and alerts.

Evidence of the outcome: GHACOF 41 SOND 2015 Forecast Presentation (pdf);
http://www.fao.org/disasterriskreduction/east-central-africa/fsnwg/documents/detail/en/c/4345/
http://rcc.icpac.net/modules/board/files/Downscaled%20GHACOF%2041%20Bulletin.pdf

References: ICPAC (2015). Project Interim Annual Report. Integrated Agricultural Production and Food Security Forecasting System for East Africa (INAPFS) Project. Reporting Period: 15th April – 31st December 2015, Nairobi, Kenya
http://www.fao.org/disasterriskreduction/east-central-africa/fsnwg/documents/detail/en/c/4345/
http://rcc.icpac.net/modules/board/files/Downscaled%20GHACOF%2041%20Bulletin.pdf/

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators: As indicated above this progress towards outcome contributes to CCAFS outcome on the 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.

Year: 2015

Annexes uploaded: FSNWG September Update 24_09_2015.pdf

Project: P42 - Tailored Agro-Climate Services and food security information for better decision making in Latin America

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP LAM - Latin America Region	**Mgmt. liaison contact**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Lead organization	CIAT - Centro Internacional de Agricultura Tropical - Colombia	**Project leader**	Giraldo, Diana <d.giraldo@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Mapping information networks in Colombia to support local institutions and address farmer's needs

Outcome statement: This is a ''Progress towards outcome'': The project team in Colombia implemented participatory workshops to map out the network of actors providing prices, climate, financial and technical information to maize and bush bean farmers in Cordoba and Santander, disseminating results with FENALCE and CORPOICA. The results are being used to design subsequent activities of the project addressing farmer's information needs.

Research Outputs: 1. CCAFS Working Paper "Mapeo de actores y necesidades de información agroclimática en los cultivos de maíz y frijol en sitios piloto - Colombia" detailing workshop results, including: farmers need targeted, local, reliable and timely information, enabling better decisions planting varieties, inputs, soil and crop management, before climate variability events; it is strategic to develop information transmission systems that take advantage of the trust farmers have in other farmers and technicians, such as through the use of social networks (media). The preferred means of transmitting information are telephone and radio. The use of applications on the phone is an effective way to receive and share information in real time. 2. CCAFS Info Note "Información agro-climática local, confiable y oportuna, una necesidad de los agricultores colombianos" summarizing the WP

Research Partners: Corporación Colombiana de Investigación Agropecuaria (CORPOICA)

Activities that contributed to the outcome: Between April and July 2015, the project team in Colombia conducted 27 semi-structured interviews with key informants at the national and departmental level and 12 focus groups with a total of 151 farmers in the departments of Córdoba (maize production) and Santander (bush beans production). Local technicians from FENALCE and CORPOICA supported the implementation of the workshops, which increases the chances of uptake of results by these institutions and the interest from farmers.

Non-research Partners: Federación Nacional de Cultivadores de Cereales y Leguminosas (FENALCE)

Output Users: FENALCE, CORPOICA, MADR, CIAT

How the output was used: The outcome is in progress: outputs were disseminated with FENALCE and CORPOICA, moreover they were made public on CCAFS' website. CIAT team will use the results of the network mapping to guide implementation of activities with farmers in 2016.

Evidence of the outcome: This is a progress towards outcome and evidence of use is not yet available. As an example of dissemination of results, a local newspaper in Santander reports preliminary findings: http://www.vanguardia.com/economia/local/332600-sequia-en-santander-genero-la-perdida-del-80-de-la-cosecha-de-frijol

References: Blundo Canto, G., Giraldo, D., Gartner, C., Alvarez-Toro, P., Perez, L. 2016. Mapeo de Actores y Necesidades de Información Agroclimática en los Cultivos de Maíz y Frijol en sitios piloto - Colombia. CCAFS Working Paper no. X. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Disponible en línea: www.ccafs.cgiar.org
Blundo Canto, G., Giraldo, D., Gartner, C., Alvarez-Toro, P., Perez, L. 2016. Información agro-climática local, confiable y oportuna, una necesidad de los agricultores colombianos. CCAFS Info note no. X. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Disponible en línea: www.ccafs.cgiar.org

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators: Given that the project has started in Spring 2015, this is a progress towards outcome and not a fully developed outcome yet.

Year: 2015

Annexes uploaded: PR Comms Summary 2015 Agroclimas.docx

Project: P43 - (GLO-EA-LAM-SA BIOVERSITY) Outscaling a citizen science approach to test climate adaptation options on farms

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	F1 - Flagship 1	**Mgmt. liaison contact**	Jarvis, Andy <a.jarvis@CGIAR.ORG>
Lead organization	BI - Bioversity International - Italy	**Project leader**	van Etten, Jacob <j.vanetten@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Creating Geographical Software and Building Capacity for its Use Strengthens Climate Change Analysis in Agriculture

Outcome statement: To adapt agriculture to future climates, the ability to identify different options through geographic analysis is crucial. We have strengthened this ability by creating open-source software and documentation and by training many professionals in 21 countries in using these tools. Our products have been used in >8,500 scientific publications. Our tools have been downloaded >350,000 times. The use of these tools and datasets informs decisions around climate change adaptation.

Research Outputs: Van Etten, J. (2012). gdistance: distances and routes on geographical grids. (http://CRAN.R-project.org/package=gdistance) Open-source software.
Citations: 57
R-SIG-Geo messages: 123
Used by other R packages (plug-ins): 5
Downloads: 25,400

Hijmans, R. J., & Van Etten, J. (2013). raster: geographic data analysis and modeling. (http://CRAN.R-project.org/package=raster) Open-source software.
Citations: 511.
R-SIG-Geo messages: 6201
Used by other R packages (plug-ins): 127
Downloads: >326,000

Hijmans, R. J., Guarino, L., Mathur, P. (2012). DIVA-GIS: A geographic information system for the analysis of species distribution data. Version 7.5. http://www.diva-gis.org/
Citations: 375.

Hijmans, R. J., Cameron, S. E., Parra, J. L., Jones, P. G., & Jarvis, A. (2005). Very high resolution interpolated climate surfaces for global land areas. International Journal of Climatology, 25(15), 1965-1978. (http://www.worldclim.org/)
Citations: 7554.

Evert Thomas et al. 2016. Itzamna: Herramienta para Mejorar la Conservación y Uso de los Recursos Fitogenéticos Mesoamericanos y Adaptar la Agricultura al Cambio Climático. http://itzamna-mesoamerica.org/

Research Partners: University of California, Davis
Centro Internacional de Agricultura Tropical, Cali, Colombia

Activities that contributed to the outcome: In 16 different courses, we have trained 256 professionals (34% women) from Bhutan, India, Nepal, Cambodia, Laos, Colombia, Guatemala, Argentina, Bolivia, Rwanda, Uganda, Kenya, Tanzania, Uganda, Ethiopia, Burkina Faso, Benin, Cote d'Ivoire, Madagascar, Zambia and Zimbabwe in the use of these tools in the period 2011-2015.
We have supervised thesis students on work using these tools from universities in Germany, Sweden, Costa Rica, Colombia, Kenya.
We have provided technical advice on request and actively contributed to user forums.
We have created web resources that advice on software choice and relevance (http://www.seedsresourcebox.org).

Non-research Partners: A large number of NARS, Ministries of Agriculture, and regional organizations have supported capacity building activities in 21 countries.

Output Users: - Scientists
- Product developers, especially plant breeders

How the output was used: Around 90% of the published analyses done with these tools focus on climate, 70% focus on agriculture and 8% on food security applications. Our tools and data have also been used to create other tools and datasets, such as CCAFS Data Portal (ccafs-climate.org), India PGR Climate portal (http://www.nbpgr.ernet.in:8080/climate/).

Evidence of the outcome: Evidence of use presented above (citations, downloads, questions in user forums, use by other software) is based on information generated with free, online data sources (Google Scholar, R-Studio logs, CRAN). Data on trainings was extracted from Bioversity's training database and CCAFS reports. For the India example, see this report:
http://www.nbpgr.ernet.in:8080/climate/images/NBPGR_CCAFS_report.pdf

References: Vernooy R, Otieno G, Bessette G et al. 2015. A novel strategy to discover and use climate-adapted germplasm. Bioversity International, Rome, Italy.

Russell, J., van Zonneveld, M., Dawson, I. K., Booth, A., Waugh, R., & Steffenson, B. (2014). Genetic diversity and ecological niche modelling of wild barley: refugia, large-scale post-LGM range expansion and limited mid-future climate threats? PloS ONE, 9(2), e86021.

Van Etten, J. (accepted). R package gdistance: distances and routes on geographical grids. Journal of Statistical Software.

Bellon, M. R., & van Etten, J. (2014). Climate change and on-farm conservation of crop landraces in centres of diversity. Plant Genetic Resources and Climate Change, 137-150.

Leibing C, Signer J, van Zonneveld M, Jarvis A, Dvorak W (2013) Selection of provenances to adapt tropical pine forestry to climate change on the basis of climate analogs. Forests 4: 155-178.

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators: This is an upstream outcome of research, providing the capacity at national level to prioritize and inform CSA strategy. It is not possible to trace for all uses given to our tools and datasets how they have precisely informed decision-making, but our own work with partners gives many examples.

Year: 2015
Annexes uploaded: <Not defined>

Project: P44 - Participatory planning and investment in climate smart agriculture to reduce risks for small--scale farmers in Central American coffee landscapes

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP LAM - Latin America Region	**Mgmt. liaison contact**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Lead organization	BI - Bioversity International - Colombia	**Project leader**	van Etten, Jacob <j.vanetten@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Climate smart investment to adapt coffee landscapes in Nicaragua

Outcome statement: To realize their ambition to establish a local biofertilizer processing plant in Esteli, Nicaragua, the cooperative Promoter of Cooperative Development in the Segovias (PRODECOOP) developed an investment plan named Sustainable Agriculture in Coffee Plantations in Nicaragua (PASCAFEN) in collaboration with Hivos and CEDECO, to attract investors. With such an investment 2,300 affiliated organic coffee farmers can get access to affordable organic fertilizer to improve soil and nutrient conditions, and enhance coffee productivity and disease resistance under climate change.

Research Outputs: Publication of PASCAFEN case study

Research Partners: Hivos, CEDECO

Activities that contributed to the outcome: CEDECO and Hivos developed with PRODECOOP innovative climate smart investment plan for the processing plant with leverage funds from a project managed by Hivos. The PASCAFEN study is being published in English. Thanks to support of CCAFS the publication is now also translated in Spanish to facilitate knowledge sharing with next users and strategic partners in Nicaragua and Guatemala and other countries in Latin America.

Non-research Partners: PRODECOOP

Output Users: PROODECOP and its members benefit directly from the investment plan because it helps them to find and convince investors. The publication is intended for other cooperatives, development agencies, government agencies, private companies and research organizations to show how a climate smart investment plan can be set up.

How the output was used: The publication on lessons learned is being finalized. The investment plan is being used to attract investors.

Evidence of the outcome: The terrain for the processing plant is ready. The investment plan is a useful tool for the cooperative to find the required money to make this investment.

References: Porras I. Coffee and carbon offsets for smallholders. pubs.iied.org/16599IIED.html?b=d CEDECO (2015) Modelo de negocio – implementación de una planta de insumos agrícolas. Working paper

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P46 - CASCAID - Capacitating African Smallholders with Climate Advisories and Insurance Development

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP WA - West Africa Region	**Mgmt. liaison contact**	Zougmore, Robert <R.Zougmore@cgiar.org>
Lead organization	ICRISAT - International Crops Research Institute for the Semi-Arid Tropics - Kenya	**Project leader**	Traore, Pierre C. Sibiry <p.s.traore@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: In West Africa, PICSA takes root in smallholders quest for enhanced resilience

Outcome statement: By developing and deploying a holistic, Participatory Integrated Climate Services for Agricultural (PICSA) approach where historical climate data is taken into account to guide farmers in their livelihood options and throughout the season, CCAFS helped 6,000 smallholder farmers change their practices in 140 communities of northern Ghana. Changes included choice of crop, livestock management, and incremental sales in their own livelihood enterprises, in their quest for stronger resilience.

Research Outputs: cf. annexes

Research Partners: The PICSA approach was developed by the University of Reading in UK. ICRAF participated in tailoring the approach to CCAFS selected sites in West Africa through training organization, with support from ICRISAT. In Ghana, PICSA deployment and monitoring and evaluation involved the African Institute for Mathematical Sciences (AIMS).

Activities that contributed to the outcome: Ghana Meteorological Agency staff were trained in the preparation and analysis of historical weather data series required for the implementation of the Participatory Integrated Climate Services for Agriculture (PICSA) approach. Subsequently, intermediaries - here extension service agents of OXFAM and ADRA - were trained on PICSA as well. This training of trainers (ToT) allowed OXFAM and ADRA staff in turn to implement PICSA with their collaborating famers in the field, guiding planning and implementation of cropping season activities. The ToT also involved participants from Burkina Faso and Mali, setting the stage for outscaling of the approach to other countries.

Non-research Partners: Ghana Meteorological Agency. OXFAM. Adventist Development and Relief Agency (ADRA).

Output Users: Next users: extension agents of the above listed NGOs (OXFAM, ADRA). End users: local communities in northern Ghana.

How the output was used: Farmers were taught PICSA approach and used it long before the season to select different livelihood options based on season probabilities taking into account historical climate data of their localities. Just before the season, options are fine-tuned based on actual season forecasts and subsequently receive within season forecasts for guidance.

Evidence of the outcome: A monitoring and evaluation study was conducted by University of Reading in collaboration with African Institute for Mathematical Sciences and Ghana Meteorological Agency to assess the use of PICSA by the farmers and also assess how useful they found the approach.

References: cf. annexes

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Torgbor2015_M&E_reports_PICSA_Ghana.pdf

Project: P49 - Surveillance and early warning systems for climate sensitive diseases in Vietnam and Laos

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP SEA - South East Asia Region	**Mgmt. liaison contact**	Tan Yen, Bui <y.bui@irri.org>
Lead organization	ILRI - International Livestock Research Institute - Vietnam	**Project leader**	Nguyen, Hung <h.nguyen@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: Surveillance and early-warning systems for climate-sensitive zoonotic diseases in Vietnam
Outcome statement: A few studies have been conducted in order to evaluate the sero-prevalences of climate sensitive diseases at national level. This study is a good opportunity to understand/improve the epidemiology of diseases as well as identifying the potential environmental/climate risk factors.
Research Outputs: Understanding the epidemiology of climate sensitive diseases Developing risk maps with GIS datasets (such as NDVI and elevation etc.) Develop a model for prediction (such as time-series analysis) Identifying potential risk factors (including climate factors)
Research Partners: - Plant Protection Research Institute (PPRI) - National Institute of Veterinary Research (NIVR) under the Ministry of Agriculture and Rural Development (MARD) in Vietnam - Institute of Meteorology and Hydrology and Climate Change, Ministry of Natural Resources and Environment (IMHEN, MONRE) - Hanoi School of Public Health (HSPH) - National Institute of Hygiene and Epidemiology (NIHE)
Activities that contributed to the outcome: We visited one of our study areas (Son La province) in order to better understand the local situations. It was a good opportunity to have a discussion with local people as well as sharing knowledge. We are planning to have more field trips to other provinces. In addition, we had several meetings with other international organizations (FAO, CIRAD and WHO). It was good opportunities to share our knowledge.
Non-research Partners: - Ministry of Agriculture and Rural Development (MARD) - Ministry of Health (MOH)
Output Users: Our analyzed information will be used to develop public health policy in relation with livestock development as well as agricultural and environmental policy.
How the output was used: Our research will be helpful to prevent/control the diseases as an early warning system. Our outcomes will be useful to develop public health policy in relation with livestock development as well as agricultural and environmental policy.

Evidence of the outcome: We have obtained the human data and climate data (last 30 years) at province level. This information was used to identify the temporal patterns of diseases and prepared manuscripts for publications. In addition, we are planning to collect/analyze samples from 6 provinces in Vietnam in collaboration with the national partners.

References: See our list of references separately in the annexes below as when we added several references here, this section was not validated.

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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
FP2 Indicator: 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
FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs
FP2 Indicator: Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

Explanation of the link between your outcome story and the CCAFS indicators: Mainly, our project is to identify the association between climate change and zoonotic diseases which is in line with CCAFS indicator.

Year: 2015

Annexes uploaded: Research proposal with partners.docx

Project: P54 - Climate-smart Villages in the Mekong Basin: Defining an Innovative and Comprehensive Approach for Catalyzing Roll-out of Adoption

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP SEA - South East Asia Region	**Mgmt. liaison contact**	Tan Yen, Bui <y.bui@irri.org>
Lead organization	IRRI - International Rice Research Institute - Philippines	**Project leader**	Wassmann, Reiner <r.wassmann@irri.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Comune Agro-Ecosystem Analysis Carried Out by the Government for CSV in Cambodia

Outcome statement: Department of Agriculture Extension (DAE), Cambodian Ministry of Agriculture Forestry, and Fisheries, carried out a Commune Agro-Ecosystem Analysis (CAEA) for Prek Norin commune where the CSV Rohal Suong is located. CAEA is an official participatory assessment tool of MAFF for sub-national level agriculture planning, to be carried out throughout Cambodia and repeated periodically. DAE was able to add Prek Norin commune as a priority for the latest cycle of assessments in view of CSA scale out in coming years.

Research Outputs: CCAFS Situation Analysis and Needs Assessment (SANA) for Rohal Suong CSV and Battambang province.

Research Partners: Department of Agriculture Extension (DAE)
Aphivat Stray (AS)
Provincial Department of Agriculture, Battambang Province

Activities that contributed to the outcome: CSV launch event in Rohal Suong, with the Prek Norin commune authorities in attendance
Provincial stakeholder consultation meetings and the workshop
Participatory CSV land use planning mapping
Various regional team planning meetings and workshops

Non-research Partners: Department of Agriculture Extension (DAE)
Aphivat Stray (AS)
Provincial Department of Agriculture, Battambang Province

Output Users: Prek Norin Commune Council, DAE, MAFF

How the output was used: The findings and the implementation process of CCAFS SANA inspired DAE to carry out a broader situation analysis for the entire commune using the existing government assessment tool.

Evidence of the outcome: A report “an agro-ecosystem analysis in Preak Norin commune, Ek Phnom district of Battambang province” in Khmer version. Unofficial summary version is being traslated into English for sharing among the CCAFS team.

References: No references at this point

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: DAE Progress Report CSV June-Dec 2015.pdf

Project: P56 - (GLO-EA-WA- ICRAF) Partnerships for scaling climate-smart agriculture (P4S-CSA)

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	F1 - Flagship 1	**Mgmt. liaison contact**	Jarvis, Andy <a.jarvis@CGIAR.ORG>
Lead organization	ICRAF - World Agroforestry Centre - Kenya	**Project leader**	Rosenstock, Todd <t.rosenstock@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: P4S is changing the landscape on CSA in Africa

Outcome statement: P4S is changing the way people think about CSA implementation in Africa and beyond. For example, P4S provided climate scenarios and impacts for the COMESA-led five country CSA Framework Programs. P4S engages with NEPAD's Vision 25 x 25 helping to shape their 'Practical Guide', a cornerstone of implementation. Furthermore, P4S is heavily involved and providing facilitation and data to ACSAA implementation in fast start countries. A key intellectual asset (CSA Plan) was also made a key input into WB CSA101.

Research Outputs: CSA Plan: A four step process for designing and implementing CSA.

CA Technical Guide: This short brief describing how CA can be implemented to achieve CSA outcomes has become the foundation of the NEPAD Practical Guide (still in draft)

Climate wizard and climate impacts outputs: The climate modeling was used in all five of the COMESA Country CSA Programs

Research Partners: ICRAF, CIAT, CCAFS

Activities that contributed to the outcome: Repeated participatory workshops helped to develop the Country Plans and long term engagement with NEPAD and ACSAA has built the necessary relationships to be believe to be an honest broker of information, The role of CCAFS researchers not only as science providers but also as facilitators of the engagement of multiple stakeholders appears to be a successful element for the adoption of CCAFS science.

Non-research Partners: Common Market for East/Southern Africa (COMESA)
New Partnership for African Development (NEPAD/CAADP)
WorldBank (WB)
Ministry of Agriculture Food Security and Cooperatives (Tanzania)
Ministry of Agriculture, Livestock and Fisheries (Tanzania)
Ministry of Agriculture, Livestock and Fisheries (Kenya)
Ministry of Environment and Natural Resources (Kenya)
Ministry of Agriculture (Botswana)
Ministry of Environment Wildlife and Tourism (Botswana)
Ministry of Environment/Tourism (Namibia)
Ministry of Agriculture water and Forestry (Namibia)
Ministry of Agriculture, Animal Industry and Fisheries (Uganda)
Ministry of Water and Environment (Uganda)

Output Users: New Partnership for African Development (NEPAD/CAADP)
WorldBank (WB)
Ministry named above for Tanzania, Kenya, Uganda, Namibia, Botswana
Alliance for CSA in Africa including iNGO partners

How the output was used: Countries directly used the analyses in Country CSA Plans.

NEPAD based their practical guide around the thinking P4S designed for the CA Practical Guide and then further developed during the sessions facilitated by P4S in the Johannesburg workshop (May 2015).

Evidence of the outcome: A validation study was not conducted this year. However, the use of research results in the CSA Country Plans is clear in the documents. Future outcomes will be substantiated with validation studies as funding allows.

References: CSA Plan: https://ccafs.cgiar.org/climate-smart-agriculture-plan-guide-scaling-csa#.Vg0qRfmqpBc
NEPAD Practical Guide: Not yet available.
COMESA Country Programs: http://canafrica.com/publication/uganda-climate-smart-agriculture-country-program-2015-2025/, http://canafrica.com/publication/namibia-country-climate-smart-agriculture-program/, http://canafrica.com/publication/?search_term=Botswana&pub-types=&pub_year=, http://canafrica.com/publication/kenya-climate-smart-agricutlure-framework-program/, http://canafrica.com/publication/tanzania-climate-smart-agriculture-program/

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: KenyaINDC_CSAPF.pdf

Project: P57 - Mainstreaming CSA practices in mixed tree/food crop systems among smallholder farmers in W Africa & Latin America

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP LAM - Latin America Region	**Mgmt. liaison contact**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Lead organization	CIAT - Centro Internacional de Agricultura Tropical - Colombia	**Project leader**	Lundy, Mark <m.lundy@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Private/public sector actors use results on CC impacts on cocoa and coffee to support strategies.

Outcome statement: CIAT results on climate suitability of cocoa and coffee were used in 2015 to prioritize strategies of private and public sector. WCF references Läderach et al. 2013 in their proposal to USAID to develop a CSA strategy for the cocoa sector. The WB's Ghana agricultural sector risk assessment uses results on projected cocoa production decrease to prioritize risk management; two WB senior scientist presentations include CIAT's findings; WCR uses findings to guide its global coffee breeding program.

Research Outputs: Using CC predictions from Global Circulation Models, Läderach et al. 2013 predict changes in relative climatic suitability for cocoa for 2050 and suggest site-specific strategies to reduce the vulnerability of the cocoa sector:
http://link.springer.com/article/10.1007%2Fs10584-013-0774-8
Läderach et al. 2011 show that the optimum cocoa-growing area will increase by 2050 to an altitude between 450-500 masl:
http://www.eenews.net/assets/2011/10/03/document_cw_01.pdf
Data for current and future climatic suitability for cocoa farming in Ghana and Ivory Coast, West Africa:
https://dataverse.harvard.edu/dataverse/Cocoa_Ghana_IvoryCoast
Bunn et al 2015a find that in zones currently classified as hot and dry, CC will impact arabica more than those that are better suited to it. Zones that currently have climates better suited for arabica will migrate upwards by about 500m in elevation:
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0140490
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0124155
Bunn et al 2015b, Impact of CC on robusta and arabica coffee globally:
http://link.springer.com/article/10.1007%2Fs10584-014-1306-x

Research Partners: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)
World Coffee Research
CCAFS

Activities that contributed to the outcome: Upon request, CIAT scientists have directly provided data and support about the models used in Läderach et al 2011, 2013, to staff of WCF and the WB. Two workshops were held in Ghana and Peru with more than 150 participants with key government and private sector actors.

WCR commissioned the study on worldwide Arabica impacts of CC to be able to create new, climate-resilient varieties tailored to individual climatic zones. The report, is co-authored by WCR's executive director Tim Schilling and WCR's Assistant Director for CORE programs, Christophe Montagnon.

Non-research Partners: Conservation International
GMCR
BMGF
WCR

Output Users: World Cocoa Foundation
The World Bank
World Coffee Research

How the output was used: Justify WCF's proposal to USAID for a CSA cocoa strategy.
Study commissioned by WCF to guide the CC strategy of members.
WB prioritizes risk management in Ghana based on projected production decrease.
WCR uses findings to locate sites for International Multi-location Variety Trial.
Inclusion of maps/results in high level presentations.

Evidence of the outcome: "CIAT Research Work with CCAFS influences decision-making of next users; a validation report''. Right Track Africa

References: https://elliott.gwu.edu/sites/elliott.gwu.edu/files/World Cocoa Foundation.pdf
http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/09/11/090224b0830cfc6b/3_0/Rendered/PDF/Ghana000Agricu00risk0prioritization.pdf
https://www.agriskmanagementforum.org/sites/agriskmanagementforum.org/files/farmd_html/farmd/images/PPT_RSCD_WorldBank_London101015_Final.pdf
http://www.gffa-berlin.de/images/stories/GFFA_2015/Arbeitssitzungen/Arbeitssitzung_Weltbank_EN.pdf
http://worldcoffeeresearch.org/read-more/news/169-unlocking-coffee-s-climate-new-wcr-research-on-coffee-and-climate-change-will-allow-dramatic-improvements-in-climate-adaptation-efforts-for-coffee-growers-and-industry
https://www.youtube.com/watch?v=eK0mfSloA_4
http://link.springer.com/article/10.1007%2Fs10584-013-0774-8
http://www.eenews.net/assets/2011/10/03/document_cw_01.pdf
https://dataverse.harvard.edu/dataverse/Cocoa_Ghana_IvoryCoast
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0140490
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0124155
http://link.springer.com/article/10.1007%2Fs10584-014-1306-x

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: CIAT outcomes validation study Feb2016.pdf

Outcome case study #2
Title: Mobilizing private sector partners for climate action in the cocoa value chain
Outcome statement: see attached PDF file
Research Outputs: see attached PDF file
Research Partners: see attached PDF file
Activities that contributed to the outcome: see attached PDF file
Non-research Partners: see attached PDF file
Output Users: see attached PDF file
How the output was used: see attached PDF file
Evidence of the outcome: see attached PDF file
References: https://cgspace.cgiar.org/bitstream/handle/10568/67911/outcomecase.pdf?sequence=3
The primary 2019 outcome indicator that this case study is contributing to: FP1 Indicator: # 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
Explanation of the link between your outcome story and the CCAFS indicators:
Year: 2015
Annexes uploaded: CSVC DFID outcome case 2015.pdf

Project: P58 - Putting climate into extension services: Climate-Site-Specific Management Systems (CSMS) for grounding climate smart agriculture to farm rice systems

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	RP LAM - Latin America Region	**Mgmt. liaison contact**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Lead organization	CIAT - Centro Internacional de Agricultura Tropical - Colombia	**Project leader**	Jimenez, Daniel <d.jimenez@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Fedearroz improves its information system through a collaboration with CIAT

Outcome statement: For some years FEDEARROZ, the Colombian rice growers federation, has been using its own information system called SACFA (Rice Farm Management System), updated to SACFA-Lite, but which presented separted separated archives for each user. In March 2015, Fedearroz and CIAT identified strategies to improve the way the association organizes and groups data in a single database, creating a new version of SACFA-Lite and training the federation technicians in its use.

Research Outputs: http://dapa.ciat.cgiar.org/agricultores-de-arroz-comprometidos-con-el-analisis-de-datos-para-enfrentar-la-variabilidad-climatica/.

Research Partners: Ministry of Agriculture of Colombia (MADR)

Activities that contributed to the outcome: To carry out the creation of a single database, a research of different softwares on the market was carried out to convert the format in which the information in SACFA is stored, to an improved one (switching from DBF to SQL to make queries faster). While integrating data, it became clear that many data needed to be corrected for missing economic information, which were added through a series of consultations with technicians. As a result of changes made to the platform a training tour was carried out with agronomists working with Fedearroz. These workshops were led and organized by the federation. The success of this activity depended on responding to a specific need of the next user.

Non-research Partners: National rice producers federation in Colombia (FEDEARROZ), Latin American Fund for Irrigated Rice

Output Users: National rice producers federation in Colombia (FEDEARROZ)

How the output was used: The federation adopted the improved version of SACFA-Lite: changes were made to the code assigned to each farm by each coordinator; updated information is linked to economic research in a unique file that can be used by each user; review of names of inputs utilized by agronomists through consultations

Evidence of the outcome: http://www.fedearroz.com.co/revistanew/correo_270.pdf

References: http://www.fedearroz.com.co/new/investEconFNA.php

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators: ---

Year: 2015

Annexes uploaded: Cantidad de personas capacitadas en SACFA.msg

Outcome case study #2

Title: Towards a Climate Smart Agriculture (CSA) in Colombia

Outcome statement: The main author of this study is the leader of the CSMS. The study included varietal evaluation within context of both climate variability and change, seasonal agroclimatic forecasting, and climate site-specific management systems as a tool to determine the most limiting factors associated with variation in productivity, and therefore to increase productivity. The project reached 500 000 growers through a platform called Agronet http://www.agronet.gov.co/. The strategy to reach farmers across Colombia also included the release of agroclimatic newsletters by MADR.

Research Outputs: About 6000 farmers are implementing Climate Smart Practices (CSP), mostly based on best varieties and planting dates at site-specific level. About 500 000 growers are reached through a platform for information management and knowledge http://www.agronet.gov.co/.

Research Partners: CCAFS
Colombian Corporation for Agricultural Research (CORPOICA).

Activities that contributed to the outcome: Federations are empowered with the tools used by scientists, and at the end of the project they are capable of : (a) selecting, multiplying and spreading the most adapted varieties according to the regions, (b) generating and interpreting seasonal forecasts not only to know the best management options (what, and where to grow) according to biophysical conditions but also the potential yield of the most adapted varieties under specific conditions, and (c) analyzing their own information to determine the most limiting factors in the production of their crops in specific regions

Non-research Partners: Ministry of Agriculture of Colombia (MADR) National Federation of Rice Growers (FEDEARROZ), the National Federation of Cereal and Grain Legume Growers (FENALCE) Colombian association for fruits and vegetables (ASOHOFRUCOL) Foundation for Territorial Sustainable Agriculture FUNDESOT , National Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM)

Output Users: Ministry of Agriculture of Colombia (MADR)
Farmers from: the Colombian National Federation of Rice Growers (FEDEARROZ) (24 000 farmers), the National Federation of Cereal and Grain Legume Growers (FENALCE) =7 000 farmers, Colombian association for fruits and vegetables (ASOHOFRUCOL) =20 000, Foundation for Territorial Sustainable Agriculture FUNDESOT =200.

How the output was used: The strategy to reach farmers across Colombia included the release of agroclimatic newsletters by MADR. The newsletter has been created under the premise of providing greater information producers recommendations to mitigate effects of climate events and report data on the evolution of the same.

Evidence of the outcome: https://cgspace.cgiar.org/bitstream/handle/10568/68403/Scaling-Up%20FINAL.pdf?sequence=1&isAllowed=y

References: Blog of Agreement between CIAT- CCAFS and MADR where processes and results are documented: http://www.aclimatecolombia.org/Interactive agroclimatic newsletter: http://www.aclimatecolombia.org/boletin-agroclimatico/

Online document with main results in terms of CSA actions: http://www.aclimatecolombia.org/wp-content/uploads/2014/12/Revista-Convenio-Nov.15.pdf

National information and communication web platform for the Agricultural Sector “Agronet” web page: http://www.agronet.gov.co/agronetweb1/Agroclima/BoletinesAgroclimaticos.aspx

Colombian association for fruits and vegetables` , NGA web page showing their implementation of site-specific focus: http://www.frutisitio.com/

Blogpost on how farmer make the decision not to plant thanks to CSA recommendation and avoid major losses: http://www.aclimatecolombia.org/la-onu-premia-proyecto-big-data-liderado-por-el-ciat-entre-las-mejores-ideas-del-mundo-para-fortalecer-la-accion-climatica/

http://dataimpacts.org/project/climate-modeling/

http://www.godan.info/wp-content/uploads/2015/04/ODI-GODAN-paper-27-05-20152.pdf

http://www.developmentprogress.org/sites/developmentprogress.org/files/case-study-report/data_revolution_-_finding_the_missing_millions-finalinfographic-corrections_290515.pdf

Blogposts on information determining the most limiting factor in crop production in specific regions:
http://www.aclimatecolombia.org/preguntas-respuestas-aeps-cierre-brechas-productivas/
http://www.aclimatecolombia.org/usando-big-data-en-la-compresion-de-factores-limitantes-en-el-rendimiento-de-arroz/
Blogposts on how Federations are empowered with the tools
http://www.aclimatecolombia.org/formacion-facilitadores-enfoques-participativos/
http://www.aclimatecolombia.org/gestion-conocimiento-fortalece-agro-colombiano-cambio-climatico/
http://www.aclimatecolombia.org/diseno-de-intervenciones-de-gestion-de-conocimiento-en-la-investigacion-agricola-para-el-desarrollo/
http://www.aclimatecolombia.org/gira-fedearroz-intercambio-saberes/
http://www.aclimatecolombia.org/sinergias-apropiacion-metodos-y-resultados/

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators: Partnership between government, grower’s organizations, and research institutions has been a key factor to succeed with the project. Tics have a huge potential not only as tools to reach unprecedented number of farmers, but also as a mechanisms to collect information and monitor the impacts of the project.

Year: 2015

Annexes uploaded: DJ__Towards a CSA in Colombia_August2015_DJ.pdf

Project: P60 - (IFPRI SA) Scaling-up climate smart agriculture through policies and institutions: linking it with national agenda of food security

Start date (dd-MM-yyyy)	01-03-2014	**End date (dd-MM-yyyy)**	31-12-2017
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	IFPRI - International Food Policy Research Institute - United States	**Project leader**	Joshi, PK <p.joshi@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: INCREASED BUDGET-ALLOCATION AND IMPROVED SUBSIDY POLICY TO PROMOTE SOLAR-PUMPS FOR IRRIGATION AND CLIMATE-SMART-AGRICULTURE IN INDIA

Outcome statement: We presented our-research to the chief-economic-advisor of the ministry-of-finance in the government of India in the pre-budget discussions organized by his office. We also presented our-work to NABARD—the leading development-bank in India and to private-firms (like Claro-Energy, SunEdison, and Rotomag) of India. Government of India has increased budget-allocation for promotion of solar-pumps (a climate-smart option) for irrigation and revised the design of the subsidy-policy. Government-of-India launched a credit-cum-subsidy scheme to install 10,000 solar-pumps in two-years (by 2016) across India.

Research Outputs: We published a research paper on effectiveness of different kinds of energy subsidies on farmers' ability to mitigate the impact of drought on agriculture along with the analysis of the impact of solar pumps. A more detailed analysis of the impact of solar pumps on crop area, crop yields and farmers' net returns from paddy in Bihar is under revise and resubmit (R&R) at a peer-reviewed international journal. We have published a news article and a blog based on this research. We presented this research in CCAFS partners' meetings in Colombo and New Delhi and shared our findings with the officials of Barind Multi-purpose Development Authority (BMDA) in Bangladesh.

Research Partners: Claro Energy facilitated evaluation of solar powered public tube-wells in Bihar by sharing data and their experience in installation and management of solar powered systems.
IWMI partnered with us in our exploratory research on public policies for promotion of solar pumps in different states of India.

Activities that contributed to the outcome: We published our research in an IFPRI discussion paper and a blog and we also published an op-ed based on our research in Mint, a leading business newspaper in India. We also presented our research and recommendation to the Ministry of Finance in the pre-budget policy discussions organized by the Chief Economic Advisor to the Minister of Finance. Further, we organized a consultation with the leading private-companies that sell solar-irrigation-pumps to share our findings with them. These companies include Claro-Energy, SunEdison and Rotomag. We approached and met senior-officials in NABARD to recommend provision of credit from Banks for farmers willing to invest in solar-pumps. We also carried-out an evaluation of solar-pumps installed by Claro Energy in Bihar and recommended Claro to try mobile solar powered pump-sets to extend their reach to more farmers. Claro-Energy has accepted our suggestion and is testing technical and financial viability of mobile solar pump-sets.

Non-research Partners: Government of India, state governments of Madhya Pradesh, Uttar Pradesh, Bihar and Maharashtra, National Agricultural Bank for Agricultural and Rural Development (NABARD), Claro-Energy, SunEdison and Rotomag

Output Users: Private companies working in the business of selling solar pumps to farmers (Claro, Rotomag, Sunedison), consultants promoting renewable energy in India (Nextant), development banks (NABARD), state and central governments in Bangladesh, India and Nepal.

How the output was used: Ministry of Finance increased budget allocation for solar-pumps for irrigation. NABARD rationalized subsidies for solar pumps according to our recommendations. Government of Madhya Pradesh is writing proposals with technical inputs from us to raise more resources from the National Green Fund, to provide more solar powered irrigation pumps to farmers.

Evidence of the outcome: We received an email from the CEA, Government-of-India, appreciating our-inputs and asking for more-information. After this, the budget-allocation to solar-pumps was increased. EPCO a nodal-agency of the-government of Madhya-Pradesh has-sought technical-inputs from us to raise-resources for installing more solar-pumps in-the-state. NABARD has changed subsidy-norms for solar-pumps according to our published-recommendations.

References: Kishore, A., Joshi, P. K., & Pandey, D. (2014). Droughts, distress, and policies for drought proofing agriculture in Bihar, India. IFPRI Discussion paper.
Kishore, A., Shah, T., & Tewari, N. P. (2014). Solar Irrigation Pumps: Farmers' Experience and State Policy in Rajasthan. Economic & Political Weekly, 49(10), 55-62.
Avinash Kishore and Divya Pandey. Fighting droughts in Bihar. IFPRI South Asia Blog, October 7th, 2015 http://southasia.ifpri.info/2015/10/07/fighting-droughts-in-bihar/
Divya Pandey. Striving for drought proof agriculture in Bihar, India. IFPRI South Asia Blog, February 13th, 2015. http://southasia.ifpri.info/2015/02/13/striving-for-drought-proof-agriculture-in-bihar-india/
Divya Pandey and Avinash Kishore. Saving agriculture from weather woes. (Opinion expressed in Livemint) http://www.livemint.com/Opinion/JHAv3hY96OGCn8uzUUcPPO/Saving-agriculture-from-weather-woes.html

The primary 2019 outcome indicator that this case study is contributing to:
FP3 Indicator: # 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.

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Solar papers.zip

Outcome case study #2

Title: FIVE STATE GOVERNMENTS IN INDIA CONSIDER NEW SCHEMES TO SCALE-OUT CLIMATE-SMART VILLAGES

Outcome statement: We developed pilot schemes worth USD 140 million for five states (Bihar, Chhattisgarh, Madhya Pradesh, Maharashtra and Uttar Pradesh) to increase investment into climate smart agriculture (CSA). Our efforts have triggered the policy process for greater allocation of plan resources for climate smart villages, which hitherto were conspicuously not budgeted.

Research Outputs: Dr Dinesh K Marothia, Member, Chhattisgarh State Planning Commission invited us to present the concept of climate-smart villages to the Task Force of the State Planning Commission and helped us to share the idea and possible ways of implementing it with government officials in Chhattisgarh. Dr Lokendra Thakkar, Executive Director, EPCO Madhya Pradesh invited us to present the idea of climate-smart village to the senior officers in the Department of Agriculture, The Renewable Energy Development Authority and the Urban Development and Environment Department of Madhya Pradesh government. Dr MJ Khan, President, Centre for Agriculture and Rural Development, New Delhi, collaborating for developing pilot schemes for Government of Uttar Pradesh.

Research Partners: 1. Dr R K P Singh, Former Member of the Bihar State Farmers' Commission, Bihar, facilitating implementation of the pilot scheme for the Government of Bihar.
2. Dr Barun Deb Pal (bdpal@isec.ac.in): Dr. Pal carried out surveys in rural Madhya Pradesh to understand farmers' preferences for CSA practices and their willingness to pay for them. He organized consultations in Madhya Pradesh, attended by scientists, extension workers and government officer.
3. Dr Mruthyunjaya. President, Agricultural Economics Research Association (AERA), New Delhi, supported in organizing a special session on 'converging policies and programs for climate smart agriculture', in the Annual Conference of AERA.

Activities that contributed to the outcome: For science-policy interface, we followed a six-pronged strategy to influencing policy making process. These include (i) organized policy dialogues to influence policy advisors, policy professionals, bankers, and farmer groups, (ii) interacted with key policy advisors and professionals, such as Secretaries and Advisors in Ministry of Agriculture, Members of Planning Boards in the selected states, Chairman of the National Bank of Agriculture and Rural Development (NABARD), (iii) attended important meetings organized by the government departments, (iv) interacted with key international donors, such as SDC, IFAD and the World Bank, (v) delivered presentations in key policy forums, including the Indian civil service officers on Civil Service Day, and (vi) organized capacity development program for extension personnel. Our events were always attended by policy advisors and senior bureaucrats. These were complemented by one-to-one interactions with key stakeholders to influence them for promoting climate smart villages.

Non-research Partners: Dr Dinesh K Marothia, Member, Chhattisgarh State Planning Commission, Chhattisgarh.
Dr Lokendra Thakkar, Executive Director, The Environmental Planning & Coordination Organization (EPCO), Madhya Pradesh, India
Dr Kirit N Shelat, Executive Chairman, National Council for Climate Change and Public Leadership, Gujarat.
Dr MJ Khan, President, Centre for Agriculture and Rural Development, New Delhi,
DNS Regional Institute of Cooperative Management, Patna, Bihar, and
Centre for Good Governance, Hyderabad, Telengana.

Output Users: The Environmental Planning & Coordination Organization (EPCO), Madhya Pradesh
State Planning Commission, Chhattisgarh
Uttar Pradesh Diversified Agriculture Support Project (UPDASP)

How the output was used: Outputs were used to prepare proposals to promote climate smart agriculture by piloting the concept climate-smart villages. Madhya Pradesh has already submitted a detailed project report to NABARD for financial support. A similar plan is under consideration in Chhattisgarh. In Bangladesh, our output was used for the 7th Plan Document.

Evidence of the outcome: Representatives-of-EPCO, Madhya-Pradesh have sent-us a request to-seek our-inputs for their detailed-project-report (DPR). A-meeting of senior-officials of MP decided to-explore adoption of CSVs. The decision was-recorded into the minutes-of-the-meeting. Government-of-Uttar-Pradesh has-invited IFPRI and CCAFS to-discuss the idea of CSV on 9th March-2016. They have-shown keen-interest in understanding, and possibly, implementing-policies for-CSA.

References: Taneja, G., Pal, B. D., Joshi, P. K., Aggarwal, P. K., and Tyagi, N. K. (2014). Farmers'-preferences for climate-smart-agriculture: An-assessment in the Indo-Gangetic-Plain (Vol. 1337). Int-Food-Policy-Res-Institute, Discussion-paper, IFPRI, Washington DC, USA.
Tyagi, N. K., Joshi, P. K., Aggarwal, P. K., and Khatri-Chhetri, A. (2014). Institutions-and-policies to scale-out climate-smart-agriculture: South-South exchanges. CCAFS-Workshop-Report. CGIAR-Research-Program-on-Climate-Change, Agriculture and Food-Security (CCAFS). Copenhagen, Denmark.
Kumar, P., Joshi, P. K., & Aggarwal, P. (2014). Projected-Effect of Droughts on Supply, Demand, and Prices of Crops in India. Economic & Political Weekly, 49(52), 55.
P K Joshi, and Pramod Aggarwal, "Agriculture must get climate smart" (Opinion-in-Newspaper) http://archive.financialexpress.com/news/column-agriculture-must-get-climate-smart/1252242

Md Tajuddin Khan, "Expert Promote Climate-Smart-Agriculture in Tribal Area" (Article-in-newspaper) http://articles.economictimes.indiatimes.com/2015-05-04/news/61800394_1_extreme-climate-events-climate-change-climate-smart

Md Tajuddin Khan, "Need to Promote Climate-Smart-Agriculture in Tribal Talukas" (Article-in-newspaper) http://www.uniindia.com/news/other/need-to-promote-climate-smart-agriculture-in-tribal-talukas-of-palghar-district-experts/49100.html

Md Tajuddin Khan, "Experts Stress on Climate-Smart-Village in Tribal Areas" (Article-in-newspaper) http://www.business-standard.com/article/pti-stories/experts-stress-on-climate-smart-villages-in-tribal-areas-115050400318_1.html

Md. Tajuddin Khan, "Perceptions of climate change and agriculture in tribal Maharashtra" (CCFAS-blog) https://ccafs.cgiar.org/blog/perceptions-climate-change-and-agriculture-tribal-maharashtra#.VaYwZ6O6bIV

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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
FP2 Indicator: Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Five states_Schemes to Scale-out CSVs.zip

Outcome case study #3

Title: MAINSTREAMING CLIMATE CHANGE: CONVERGENCE OF POLICIES AND PROGRAMS FOR SUSTAINABLE AND CLIMATE RESILIENT AGRICULTURE

Outcome statement: Number of strategies are targeted to mainstream the activities of development planning for Bangladesh in order to ensure that Bangladesh's development plan is climate resilient and/or climate sensitive. The report also provided specific examples to help policy makers understand and develop policies to build resilience to agriculture to reduce vulnerability due to climate change. The main objectives are for triggering investment and to upscale for climate smart agriculture (CSA).

Research Outputs: Several programs and policies have been analysed for convergence of policies and programs for sustainable and climate resilient agriculture. A report is produced and submitted to Government of Bangladesh in aid for developing policies on sustainable and climate resilient agricultural for the 7th Five Year Plan (2015-2020) and to promote and upscale the investment in climate smart agriculture technologies and practices.

Research Partners: 1. Professor Zahurul Karim, Fellow of the World Academy of Sciences, Former Secretary, Government of Bangladesh and Chairman, Centre for Agri-research and Sustainable Environment and Entrepreneurship Development (CASEED) Dhaka, Bangladesh

2. Professor A.K. EnamulHaque, Director, Asian Center for Development, Professor of Economics, East West University, Dhaka, Bangladesh

Activities that contributed to the outcome: We organized policy dialogues to influence policy advisors, policy professionals and interacted with key policy advisors and professionals, such as Secretaries and Advisors in Ministry of Agriculture, Members of Planning Boards. Attended important meetings organized by the government departments and assisted General Economics Division of Bangladesh Panning commission for the 7th five year plan to develop proposal and program to upscale climate smart agriculture. Delivered presentations in key policy forums which were attended by policy advisors and senior bureaucrats.

Non-research Partners: General Economic Division of Bangladesh Planning Commission.

Output Users: Government of Bangladesh

How the output was used: A study to identify-opportunities for better-convergence in government policies and programs in Bangladesh has been used by the General Economics Division of the Planning Commission to prepare the 7th Five-Year Plan for 2015-16-2019-20.

Evidence of the outcome: Our study-recommendation is used by General-Economics-Division of the Bangladesh Planning-Commission for the 7th five-year plan. However due to political-uncertainty in Bangladesh have resulted in an unstable-and-somewhat unpredictable policy-environment in-the region. Therefore, the documentary-evidence for convergence-for-policies and programs and for increase in investment for climate-smart-agriculture are yet to be available.

References: GOB. (1999). National Water Policy. Dhaka: Ministry of Water Resources, Government of Bangladesh.
GOB. (2008). National Food Policy Plan of Action (2008-15). Dhaka: Ministry of Food and Disaster Management, Government of Bangladesh.
GOB. (2009). Bangladesh Climate Change Strategy and Action Plan 2009. Dhaka: Government of Bangladesh.
GOB. (2011). Bangladesh Country Investment Plan: A road map towards investment in agriculture, food security and nutrition. Dhaka: Government of Bangladesh.
GOB. (2013). National Agricultural Policy 2013. Dhaka: Ministry of Agriculture, Government of Bangladesh.
Government of Bangladesh. (2013). National Agricultural Policy. Dhaka: Ministry of Agriculture.

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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
FP2 Indicator: 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
FP2 Indicator: Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Mainstreaming Climate Change_Bangladesh.pdf

Project: P62 - Climate Change and Social Learning (CCSL) Initiative: Community of Practice and Evidence Base of social learning to up-scale outcomes

Start date (dd-MM-yyyy)	01-11-2011	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	FP4 Leader - FP4 Leader	**Project leader**	Thornton, Philip <p.thornton@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: Tracking Adaptation and Monitoring Development (TAMD) using CCSL indicators for monitoring and learning
Outcome statement: TAMD, an existing IIED program, has received funding to start a new phase integrating CCSL indicators to monitor and evaluate the impact of a social learning-oriented approach in projects/programs with climate change adaptation goals.
Research Outputs: The CCSL M&E Framework, developed in 2014 and published as CCAFS working paper #98 in early 2015, is being used by this newly funded phase of TAMD, which begins in Apr 2016. TAMD will build on the outcomes of the piloting, which will be written up by the end of March 2016. Experience with the CCSL M&E framework will also feed back into an updated framework.
Research Partners: Several partners have been involved in supporting the development of the CCSL M&E Framework, including ILRI (Kenya), ILRI (Ethopia), Westhill Knowledge, Euforic Services, and the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA) funded by DFID and the Canadian International Development Research Centre (IDRC).
Activities that contributed to the outcome: Outreach and networking contributed to the development of the partnership with TAMD. Within IIED, with DFID and others engagement has been ongoing over the last two years to explore the integration of learning-based approaches into existing programs, or co-designing new programs.
Non-research Partners: Five initiatives have participated in piloting the CCSL M&E Framework: the International Potato Center (CIP) in Peru, Sustainable Amazonas Foundation (FAS) in Brazil, World Vision International's (WVI) program Africa Climate Change Resilience Alliance (ACCRA) in Uganda, and IITA's program (Policy Action for Climate Change Adaptation) PACCA also in Uganda.
Output Users: TAMD will be using the CCSL M&E Framework with a set of projects that is currently being selected.
How the output was used: The CCSL Framework will be integrated with the TAMD indicators, which track adaptation and development outcomes.
Evidence of the outcome: Evidence is the funding from DFID for joint work between TAMD and CCSL.

References: There are no publicly available materials yet.

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P63 - CCAFS scenario-guided policy and investment planning

Start date (dd-MM-yyyy)	01-01-2011	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	University of Oxford - University of Oxford - United Kingdom	**Project leader**	Vervoort, Joost <joost.vervoort@eci.ox.ac.uk>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: DFID outcome case: scenario-guided policy development in 7 countries
Outcome statement: As part of DIFD portfolio, CCAFS has helped formulate a range of agriculture, climate and development policies and plans in Honduras (National Strategy for Climate Change Adaptation in Agriculture), Cambodia (Climate Change Priorities Action Plan), Bangladesh (7th 5 year plan), Tanzania (New Environmental Policy), Uganda (Agricultural Sector Plan), Burkina Faso (National Plan for the Rural Sector), Colombia (Action Plan for the National Agricultural Adaptation Strategy) and Ghana (National Climate Change Policy). Policy makers tested their plans against diverse socio-economic/climate scenarios.
Research Outputs: See DFID outcome case for links. Longer version (with all relevant links) https://www.dropbox.com/s/aok0983oyfe64r3/Scenarios%20Project%20DFID%20outcome%20case.docx?dl=0 Published (shorter) version: https://ccafs.cgiar.org/publications/national-climate-agriculture-and-socio-economic-development-policies-and-plans#.VtgINJwrKM9
Research Partners: See DFID outcome case for links. Longer version (with all relevant links) https://www.dropbox.com/s/aok0983oyfe64r3/Scenarios%20Project%20DFID%20outcome%20case.docx?dl=0 Published (shorter) version: https://ccafs.cgiar.org/publications/national-climate-agriculture-and-socio-economic-development-policies-and-plans#.VtgINJwrKM9
Activities that contributed to the outcome: See DFID outcome case for links. Longer version (with all relevant links) https://www.dropbox.com/s/aok0983oyfe64r3/Scenarios%20Project%20DFID%20outcome%20case.docx?dl=0 Published (shorter) version: https://ccafs.cgiar.org/publications/national-climate-agriculture-and-socio-economic-development-policies-and-plans#.VtgINJwrKM9
Non-research Partners: See DFID outcome case for links. Longer version (with all relevant links) https://www.dropbox.com/s/aok0983oyfe64r3/Scenarios%20Project%20DFID%20outcome%20case.docx?dl=0 Published (shorter) version: https://ccafs.cgiar.org/publications/national-climate-agriculture-and-socio-economic-development-policies-and-plans#.VtgINJwrKM9

Output Users: See DFID outcome case for links. Longer version (with all relevant links) https://www.dropbox.com/s/aok0983oyfe64r3/Scenarios%20Project%20DFID%20outcome%20case.docx?dl=0
Published (shorter) version: https://ccafs.cgiar.org/publications/national-climate-agriculture-and-socio-economic-development-policies-and-plans#.VtgINJwrKM9

How the output was used: See DFID outcome case for links. Longer version (with all relevant links) https://www.dropbox.com/s/aok0983oyfe64r3/Scenarios%20Project%20DFID%20outcome%20case.docx?dl=0
Published (shorter) version: https://ccafs.cgiar.org/publications/national-climate-agriculture-and-socio-economic-development-policies-and-plans#.VtgINJwrKM9

Evidence of the outcome: See DFID outcome case for links. Longer version (with all relevant links) https://www.dropbox.com/s/aok0983oyfe64r3/Scenarios%20Project%20DFID%20outcome%20case.docx?dl=0
Published (shorter) version: https://ccafs.cgiar.org/publications/national-climate-agriculture-and-socio-economic-development-policies-and-plans#.VtgINJwrKM90

References: See DFID outcome case for links. Longer version (with all relevant links) https://www.dropbox.com/s/aok0983oyfe64r3/Scenarios%20Project%20DFID%20outcome%20case.docx?dl=0
Published (shorter) version: https://ccafs.cgiar.org/publications/national-climate-agriculture-and-socio-economic-development-policies-and-plans#.VtgINJwrKM9

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #2

Title: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4

Outcome statement: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4

Research Outputs: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4

Research Partners: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4

Activities that contributed to the outcome: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4

Non-research Partners: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4

Output Users: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4

How the output was used: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4

Evidence of the outcome: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4
References: See Costa Rica INDC Outcome Case reported by UCI as co-branded by LAM and FP4
The primary 2019 outcome indicator that this case study is contributing to:
Explanation of the link between your outcome story and the CCAFS indicators:
Year: 2015
Annexes uploaded: <Not defined>

Project: P64 - Enhancement of modeling tools (IMPACT) and targeted policy engagement.

Start date (dd-MM-yyyy)	01-01-2012	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	IFPRI - International Food Policy Research Institute - United States	**Project leader**	Rosegrant, Mark <m.rosegrant@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: Continued collaboration with OECD shows their improved capacity to estimate and analyze climate change impacts
Outcome statement: The partnership with OECD over the use of the IMPACT model continues to lead to opportunities to engage on OECD policy discussions. The collaboration, which produced an OECD Report in 2014, has seen the OECD leading a follow up article in EuroChoices, published in 2015. This article was geared towards policy-makers in Europe and helped to increase the visibility of the work done in 2014.
Research Outputs: http://onlinelibrary.wiley.com/doi/10.1111/1746-692X.12088/full
Research Partners: Trade and Agriculture Directorate, Environment Division, OECD, Paris: Ada Ignaciuk This specific research output was also supported by the Research Program in Policies, Institutions and Markets (PIM) of the CGIAR
Activities that contributed to the outcome: Worshops, targeted training on the IMPACT model, and continuing personal communication
Non-research Partners: None. This work was mainly bilateral, through interactions between IFPRI and OECD, and building on the results of the work brought forward by IFPRI and his partner institutions listed in the Partner section.
Output Users: OECD
How the output was used: Analysis on climate-change informs OECD recommendations for investments in agriculture. Results from the Eurochoices article, and new IMPACT results, will be used to summarize the current state of knowledge on Climate-change and agriculture at an Agricultural-Ministerial-Meeting scheduled for April 2016 at the OECD. France and the US are Co-Chairs.
Evidence of the outcome: Successful collaboration with Ada Ignaciuk has led to greater legitimacy for the IMPACT system of models, especially within the OECD, leading to requests for additional collaboration. A specific request has been made to use the IMPACT model to analyze agricultural trade policies in the Philippines.
References: Ignaciuk, Mason-D'Croz and Islam. 2015: http://onlinelibrary.wiley.com/doi/10.1111/1746-692X.12088/full

The primary 2019 outcome indicator that this case study is contributing to: FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs
Explanation of the link between your outcome story and the CCAFS indicators:
Year: 2015
Annexes uploaded: <Not defined>

Project: P66 - Global policy support for biologically diverse, climate resilient agriculture

Start date (dd-MM-yyyy)	01-01-2013	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	BI - Bioversity International - Italy	**Project leader**	Halewood, Michael <m.halewood@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Nepalese government adopts two policies increasing availability and use of crop diversity for climate resilience

Outcome statement: CCAFS partners led the process to revise the National Agrobiodiversity Policy, 2007 so that it now it prioritizes identification and and use of genetic resources for climate-change adaptation and ensuring access to farmers. It also provides the authorizing environment for implementation of the ITPGRFA. It was approved by Cabinet.

CCAFS partners also made substantial contributions to revising the NBSAP reflecting same priorities (as Agrobiodiversity Policy) and the need to integrate biodiversity into climate change strategies. Revised version approved by Cabinet.

Research Outputs: Draft National Agrobiodiversity Policy (2007) Revised 2014

Comments and suggested text for inclusion in the National Biodiversity Strategic Action Plan 2014-2020.

Research Partners: The research partners were Nepal Agricultural Research Council (NARC), Ministry of Agricultural Development (MoAD) and Local Initiatives for Biodiversity, Research and Development (LIBIRD). Madan Raj Bhatta, Chief, National Agriculture Genetic Resources Center (National Genebank) under NARC coordinated in the process of revising National Agrobiodiversity Policy 2007 and assembling comments and presenting them for revision of the NBSAP. LIBIRD participated in the revisions. MoAD organized the national level consultation meetings and created a forum to discuss and advance the processes.

Other key personnel involved the process were Dr Devendra Gauchan, Dr Bal K. Joshi, Krishna H. Ghimire (NARC); Chiranjibi Bhattarai as independent legal expert, Dr Pashupati Chaudhary and Rachana Devkota (LIBRID), and Bidya Pandey and Ramita Manandhar (MoAD).

Activities that contributed to the outcome: In 2012, the CCAFS partners received approval from the Secretary, Ministry of Agricultural Development to coordinate a process to revise the 2007 Agrobiodiversity Policy, including a series of consultations with seed companies, community seed banks, farmers organizations, other Ministries, research organizations and CBD, UNFCCC and ITPGRFA focal points and the National Agriculture Biodiversity Conservation Committee. As part of those consultations, the CCAFS research partners shared information about how access to PGRFA from other countries will become increasingly important for Nepal to adapt to changing climatic conditions. The first draft was considered by the National Agrobiodiversity Conservation Committee, which is chaired by the Secretary of Ministry of Agricultural Development. CCAFS partners made revisions following the committee's recommendations, and the revised draft was submitted by the Secretary to the Nepalese cabinet. The lead CCAFS partner presented the draft policy to the Nepalese Council of Ministers in November, 2014, which approved the policy.

Non-research Partners: Jaya Mukunda Khanal, Secretary, MoAD; Udhay Chandra Thakur, National Focal Point for ITPGRFA provided authority for the process. MoAD played key role in finalizing and approving the agrobiodiversity policy and submitting it to Cabinet.

Output Users: National Agrobiodiversity Conservation Committee, the Secretary of Ministry of Agricultural Development, Nepalese Council of Ministers

How the output was used: The proposed draft policy was considered and adopted by the various nested layers of decision making authorities and bodies in the country.

Evidence of the outcome: This blog posts captures the earlier, mid-stage efforts made by our CCAFS partners and the Bioversity coordinated GRPI project to work towards these outcomes, when the teams were developing and submitting drafts for consideration by policy decision-makers.

https://grpi2.wordpress.com/2014/01/27/securing-crop-diversity-for-climate-change-adaptation-creating-policy-space-for-nepal-to-participate-in-the-multilateral-system-of-access-and-benefit-sharing/

References: Agro Biodiversity Policy, 2007 (First Amendment) 2014 available at https://drive.google.com/drive/u/1/folders/0B0VTAnaUDXLBUEtHcWZQdFowSzg

Nepal's National Biodiversity Strategy and Action Plan, 2014-2020 at https://www.google.it/search?q=nepal+NBSAP+2014&sourceid=ie7&rls=com.microsoft:en-US:IE-Address&ie=&oe=&gfe_rd=cr&ei=TN3WVvWdHcLD8geKpqSoCA&gws_rd=ssl

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #2

Title: Uganda adopts two policies to increase availability and use of PGR for climate change adaptation

Outcome statement: National institutions/CCAFS partners (with the support of Bioversity) prepared Uganda's first list of crop accessions to be made available through the multilateral system and notified the ITPGRFA Secretariat accordingly, creating the opportunity for users in Uganda and around the world to access germplasm conserved in Uganda.

CCAFS partners negotiated an agreement between lead agencies across three sectors to define responsibilities and coordinate actions for regulating access to genetic resources and benefit sharing

Research Outputs: A memorandum of understanding was developed establishing a) that the National Council for Science and Technology (UNCST), is ultimately responsible for implementing both ITPGRFA and the CBD/Nagoya protocol in Uganda, but that b) delegation of responsibility to the Uganda national genebank (NARO-PGRC) for regulating access to PGRFA under the ITPGRFA, and c) delegation of responsibility to the National Environmental Management Agency (NEMA) for regulating access under the CBD/Nagoya Protocol. The overcomes a policy bottleneck that had existed for many years, whereby no organization was clearly recognized to have authority to provide access to PGRFA.

Notification to the Treaty Secretary including a list of PGRFA from Uganda that are included, and internationally available, through the ITPGRFA's multilateral system.

Research Partners: The National Agricultural Research Organization, the Uganda National Council for Science and Technology, the National Biosafety Committee, The National Environment Management Authority, the Ministry of Agriculture, the Uganda Wildlife Authority, Makerere University, CIAT.

Activities that contributed to the outcome: A national research team consisting the national Treaty Focal Point, genebank staff, and researchers from government and non-government organizations, conducted research, awareness-raising and capacity-building activities to identify options for Uganda to implement the ITPGRFA and take advantage of it for climate change adaptation in particular. They conducted research on past levels of reliance on 'foreign germplasm,' and investigated case studies of potentially increased reliance based on climate changes. They coordinated country-wide consultations with organizations holding plant genetic resource collections, to identify those which are automatically, or could be voluntarily be, included in the MLS. They sought confirmation of the list with the competent national authority and followed up with notice being sent to the ITPGRFA Secretary. The ITPGRFA National Focal Point worked closely with the Nagoya National Focal Point and the NCST, to broker the MoU and the PGRFA list to create space for implementing the ITPGRFA.

Non-research Partners: The National Agricultural Advisory Services, Action Coalition for Development and Environment, the Uganda Farmers' Association, CARITAS, and the Kiziba Community Genebank all participated in consultations.

Output Users: The direct users of the MoU are the three relevant national institutions implementing the ITPGRFA, and CBD/Nagoya Protocol. The direct users of the notification is the Secretariat of the Treaty, and all PGRFA users around the world who will learn about availability of those materials from the ITPGRFA website.

How the output was used: The MoU and the PGRFA inclusion list provided the authorizing environment for the operation of the MLS under the ITPGRFA. In future, genebank managers, breeders, researchers and farmers from Uganda and around the world who want to provide or obtain access to genetic resources will benefit from it.

Evidence of the outcome: These blog posts -- the most recent co-authored by the Uganda National Focal Points for the ITPGRFA and CBD/Nagoya -- capture the early, mid-stage and recent contributions of our national CCAFS partners to these outcomes.

https://grpi2.wordpress.com/2016/03/02/climate-change-adaptation-and-mutually-supportive-implementation-of-access-and-benefit-sharing-policies-in-uganda/ Blog post co-authored .

https://grpi2.wordpress.com/2013/10/31/participatory-research-and-capacity-strengthening-in-east-africa-linking-farmers-scientists-and-policy-makers-to-use-crop-diversity-for-climate-change-adaptation/

https://grpi2.wordpress.com/2013/01/30/climate-analogues-rwanda-uganda/

References: Memorandum of Understanding between NCST, NARO and NEMA available at https://drive.google.com/drive/u/1/folders/0B0VTAnaUDXLBUEtHcWZQdFowSzg

Notification from Ugandan national competent authority to the Secretary of the International Treaty available at https://drive.google.com/drive/u/1/folders/0B0VTAnaUDXLBUEtHcWZQdFowSzg

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #3

Title: Two policy outcomes in Costa Rica for ensuring facilitated exchange of plant genetic resources

Outcome statement: National governmental agencies signed an agreement with measures for implementing the multilateral system in Costa Rica, providing facilitated access to Costa Rica PGRFA in harmony with other international conventions. The National Institute for Innovation and Transfer of Agricultural Technology coordinated consultations regarding PGRFA included in the MLS and notified the ITPGRFA Secretariat about the inclusion of those collections, now shared with all potential PGRFA users worldwide. CCAFS national partners facilitated communication among agencies and drafted and negotiated the agreement.

Research Outputs: CCAFS national partners published one journal article and one report on legal, policy and institutional recommendations for the implementation of the ITPGRFA (2013 and 2014, available at http://revistas.ucr.ac.cr/index.php/juridicas/article/view/21539/21789 and https://grpi2.files.wordpress.com/2015/04/identificacic3b3n-del-perfil-y-de-las-posibles-autoridades-nacionales_tirfaa-en-costa-rica.pdf).
CCAFS national partners drafted and negotiated a memorandum of understanding among national agencies in charge of the implementation of the ITPGRFA, the CBD and the Nagoya Protocol for the implementation of the multilateral system of the ITPGRFA in line with the other international conventions. (2015, included as an annex)
In support of these outputs, national partners produced also three reports on i) the importance of genetic resources for Costa Rica's production of food security crops; ii) the dependence of Costa Rica on other countries' genetic resources of these crops; and iii) the potential of genetic resources in allowing these crops' adaptation to climate change (2014 and 2015, a synthesis is available as at: https://cgspace.cgiar.org/handle/10568/71223)

Research Partners: National Commission on Plant Genetic Resources (CONAREFI), Centro Agronomico Tropical de Investigación y Enseñanza (CATIE), National Institute for innovation and transfer of agricultural technologies (INTA), Ministry of Agriculture.

Activities that contributed to the outcome: A national research team consisting the national Treaty Focal Point and researchers from various organizations conducted research, awareness-raising and capacity-building activities to identify and discuss options for the implementation of the ITPGRFA in Costa Rica, paying a particular attention its potential in supporting national efforts for agriculture adaptation to climate change. They conducted research on past levels of reliance on 'foreign germplasm,' and investigated case studies of potentially increased reliance based on climate changes. They also conducted legal and policy analyses of different implementation options. They coordinated consultations with relevant governmental organizations to agree on the most efficient and feasible way to implement the multilateral system in harmony with other related conventions like the CBD and its Nagoya Protocol and supported INTA in identifying the national collections included in the multilateral system. Interaction with Bioversity experts and national experts from other countries involved in the project contributed to the outputs.

Non-research Partners: National Commission on Biodiversity Management (CONAGEBIO, Ministry of Environment), National Seed Office (Ministry of Agriculture)

Output Users: The main users of the outputs have been the CONAGEBIO and the Ministry of Agriculture, who are the governmental agencies in charge of implementing the ITPGRFA, the CBD and the Nagoya Protocol.

How the output was used: Users have used the project outputs to develop a directive (Included in the MoU) which spells out the procedures and each agency's tasks in relation to the implementation of the multilateral system in Costa Rica. Outputs have also assisted and empowered the INTA to notify the collections included.

Evidence of the outcome: The following blog-posts document early, mid-stage and recent contributions of our national CCAFS partners to the outcome:
https://grpi2.wordpress.com/2012/09/04/grpi-2-project-starts-in-the-americas-kick-off-workshop-in-costa-rica/
https://grpi2.wordpress.com/2014/04/02/sistemas-de-informacion-geografica-para-un-mejor-manejo-de-la-informacion-sobre-la-diversidad-genetica-de-nuestros-cultivos/
https://grpi2.wordpress.com/2015/04/17/hot-off-the-press-outputs-from-partners/

References: MoU: Carta de Entendimiento para la implementación del Sistema Multilateral de Acceso y Distribución de Beneficios del Tratado Internacional de Recursos Fitogenéticos para la Agricultura y la Alimentación y su relación con el régimen legal nacional de acceso y distribución de beneficios con miras a lograr una implementación sinérgica de ambos regímenes (in Annex)

Notice to Treaty Secretariat regarding materials included in the multilateral system, 14 October 2015, available at http://www.planttreaty.org/inclusions

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: MoU Costa Rica.pdf

Project: P69 - Climate science tools and engagement

Start date (dd-MM-yyyy)	01-01-2011	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	FP4 Leader - FP4 Leader	**Project leader**	Thornton, Philip <p.thornton@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: Scaling up PICSA (Participatory Integrated Climate Services for Agriculture) in SSA
Outcome statement: PICSA was developed with support from CCAFS starting in 2012. In 2015 PICSA was implemented and scaled up in three countries in SSA and built into plans by International Organisations and NGOs for scaling up in an additional five countries for 2016 (Senegal, Mali, Rwanda, Lesotho and Zambia). Users of PICSA in 2015 include a) national Agricultural and Meteorological Organisations b) International Organisations including WFP and IFAD c) NGOs including Oxfam, Red Cross and ADRA.
Research Outputs: Dorward P, Clarkson G and Stern R (2015). Participatory Integrated Climate Services for Agriculture (PICSA): Field Manual. Walker Institute, University of Reading. ISBN: 9780704915633 https://cgspace.cgiar.org/rest/bitstreams/60947/retrieve
Research Partners: University of Reading, CCAFS
Activities that contributed to the outcome: Training and capacity building of staff in Malawi, Ghana and Tanzania. Development of PICSA through design, action and reflection. Presentations on PICSA at national and international meetings and workshops including Paris COP. Online Launch of PICSA Manual. Development of online training material. Running of e-learning course online which included module on PICSA. Monitoring and Evaluation of PICSA in countries with partners.
Non-research Partners: WFP, African Institute for Mathematical Sciences (AIMS Ghana), GFCS, Ghana Met. Agency (GMet), Tanzania Meteorological Agency (TMA), Department for Climate Change and Meteorological Services (DCCMS Malawi)
Output Users: WFP, Oxfam, CARE, Red Cross Malawi, Malawi Government Extension Services, ADRA, Tanzania Meteorological Agency (TMA), Department for Climate Change and Meteorological Services (DCCMS Malawi), IFAD
How the output was used: NGO and national organisations staff were trained on PICSA. They have implemented PICSA through their staff and community volunteers working with farmers and farmer groups in the countries noted above. International organisations and NGOs have built into their plans to scale out PICSA to a further five countries in 2016

Evidence of the outcome: ADRA report on implementation in Ghana
Presentation in Nairobi - includes preliminary monitoring results
WFP blogs show WFP using it
CCAFS and Walker Websites and CCAFS blogs

References: Dorward P, Clarkson G and Stern R (2015). Participatory Integrated Climate Services for Agriculture (PICSA): Field Manual. Walker Institute, University of Reading. ISBN: 9780704915633 https://cgspace.cgiar.org/rest/bitstreams/60947/retrieve

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies
FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: PICSA Nairobi PTD presentation1.pptx

Project: P85 - (BRIDGING- GLO- BIOVERSITY) Climate change variabilty adaptation planning tools for bananas and plantains

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	F1 - Flagship 1	**Mgmt. liaison contact**	Bonilla, Osana <o.bonilla@cgiar.org>
Lead organization	BI - Bioversity International - Italy	**Project leader**	Staver, Charles <c.staver@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Banana experts access tools which project global climate-change effects and help manage local weather variability

Outcome statement: Banana growing countries convening in four regional banana networks are more aware and ready to engage in climate-change adaptation planning through testing of adaptation approaches to weather variability. This awareness resulted from presentations and discussions in six network meetings since 2011 and a summary research article available in three languages, a participatory banana mapping website with overlays of current and projected climate for 2050 and an electronic survey and focus groups on the effects of extreme weather events affecting banana

Research Outputs: - Chapter in FAO book: available in English (http://www.fao.org/3/a-i4332e/i4332e09.pdf), translated into Spanish (http://banana-networks.org/musalac/files/2016/03/FAO-Cap%C3%ADtulo-9_SPA_final.docx.pdf) and French (http://banana-networks.org/innovate-plantain/files/2016/03/FAO_Report_Chapitre-9_FRE_final.pdf)
- Study of Ecuador banana sector: Spanish (http://www.fao.org/3/a-i5116s.pdf)
- Global Survey: Importance and management of moderate and extreme weather events for banana (annex)
- Local focus groups to identify current status and knowledge gaps for practices to avoid, buffer and recover from extreme weather events (annex)
- Tools to quantify frequency and intensity of extreme and moderate weather events of significance for banana, from weather station records and in real time (pending)
- Role of weather events in global banana export markets (annex)
- Banana mapper with overlays of current climate and projected climate for 2050 (http://www.crop-mapper.org/banana/)
- Poster in CSA 2015, Montpellier (https://ccafs.cgiar.org/publications/building-global-framework-banana-resilience-and-adaptation-under-increased-weather#.Vq_oC7IrLIU)
Research products incomplete at the end of 2015 due to budget cut of 33%. Resulted in reduced time for scientist by five months

Research Partners: Country representatives from national research institutes in 40 banana countries in four regional banana networks who participated in survey on the effects of moderate and extreme weather events on banana (www.banana-networks.org);
Lists of banana experts identified by country representatives who participated in surveys on extreme and moderate weather events;
Banana scientists in INIAP Ecuador, IDIAF Dominican Republic, CENIBANANO Colombia who validated focus group method and co-facilitated focus groups in key banana localities;
CIRAD FruiTrop – fruit market observatory – provided access to weekly and monthly reports on markets and weather events as well as orientation on data interpretation and advice on methodology

Activities that contributed to the outcome: - Climate change discussion with banana country representatives in Musalac in August 2015, June 2013 and June 2011, in Barnesa in October 2013, in Innovate Plantain in November 2013 and in BAPNET November 2012.
- Key note addresses on climate change impacts on banana in banana symposium in Taiwan with 400 participants in November 2012 (http://banana-networks.org/bapnet/files/2013/02/Calberto1.pdf), in Armenia, Colombia in June 2013 (http://bit.ly/1TP4iXi), in Guayaquil, Ecuador in January 2014 (http://bit.ly/1QOGa7X) and in Piura, Peru in June 2011 (http://banana-networks.org/musalac/files/2015/09/12-C-Staver-Bananeros-Cambio-Climatico.pdf) and in poster at III Latin American Congress on Banana and Plantain Corupa, Brazil 2015 (http://bit.ly/1WNCgup)
- Bioversity web news on FAO banana climate change chapter (web link see below)
- FAO news release on climate change book (http://www.fao.org/news/story/en/item/293954/icode/)
- Interviews on local university news channel Cali, Colombia
https://www.youtube.com/watch?v=PBCrN614G0E&feature=youtu.be
https://www.youtube.com/watch?v=uBqiYqto278&feature=youtu.be
- Preparation of country by country reports on status of banana mapping, climate change projects and variability (pending)

Non-research Partners: Nine focus groups involving leading banana growers, field technicians and banana specialists in Ecuador (Agroban, Fenaprope, Asprobanec, Asoguabo, Machala), Colombia (Cenibanao, Ministerio de Agricultura), in Dominican Republic (Coopasvega) and one subtropical zone in Brazil (Asbanco), who identified seasonal weather variability and fluctuation in banana yield, identified the characteristics of good and bad years in terms of weather events and discussed causes and possible management strategies to avoid, buffer and recover from extreme events.. (see annex)

Output Users: Scientists representing national research institutes in banana countries in four regional banana networks
687 banana experts on country lists compiled by banana country representatives
National climate change adaptation planning offices in banana producing countries contacted by banana country representatives to explore insertion of banana into national climate change adaptation plans

How the output was used: Primarily at awareness stage with follow up needed to identify mechanisms for banana tools to be used in national and local climate change adaptation planning

Evidence of the outcome: The process is ongoing:
750 views from 95 countries to Bioversity web news in English (http://www.bioversityinternational.org/news/detail/bananas-and-climate-change-what-is-going-to-happen-to-one-of-the-worlds-favourite-fruits/);
113 views from 22 countries to Bioversity web news in Spanish (http://www.bioversityinternational.org/news/detail/bananos-y-cambio-climatico-que-va-a-pasar-con-una-de-las-frutas-preferidas-en-el-mundo/);
337 visits from 63 countries to banana mapper in 2015:
downloads of FAO book chapter on climate change in banana

References: 2015. Calberto, G.A., Siles, P., Arguello, J., Staver, C., Sotomayor I., Bustamante, A. Capítulo 4: Evaluación del impacto del cambio climático en la producción y aptitud del banano en el Ecuador. En: Cambio Climático y sostenibilidad del banano en el Ecuador: Evaluación de impacto y directrices de política. Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO), Roma, Italia. (http://www.fao.org/3/a-i5116s.pdf)

2015. Calberto, G. A., Staver, C., Siles, P. Chapter 9: An assessment of global banana production and suitability under climate change scenarios. En: Climate change and food systems: global assessments and implications for food security and trade. Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO), Roma, Italia. http://www.fao.org/3/a-i4332e/i4332e09.pdf

2015. Calberto, G.A., Staver, C., Siles, P., Building a global framework for banana resilience and adaptation under increased weather variability and uncertainty. Climate-Smart Agriculture Conference. Montpellier, Francia. (https://ccafs.cgiar.org/publications/building-global-framework-banana-resilience-and-adaptation-under-increased-weather#.Vq_oC7IrLIU).

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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
FP2 Indicator: Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)
FP3 Indicator: # millions of hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: annex stakeholder tools banana CC adaptation.zip

Project: P87 - Developing climate-smart village models through integrated participatory action research at site in West Africa

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	RP WA - West Africa Region	**Mgmt. liaison contact**	Zougmore, Robert <R.Zougmore@cgiar.org>
Lead organization	ICRISAT - International Crops Research Institute for the Semi-Arid Tropics - India	**Project leader**	Ouedraogo, Mathieu <m.ouedraogo@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: High Level stakeholders engaged in prioritizing CSA portfolios and guiding investments in Mali
Outcome statement: Through the collaboration and leadership since 2014 of national stakeholders (AEDD and the NGO AMEDD on behalf of the CCASA National platform) and the CCAFS Program, i.e. CIAT, CCAFS FP1 and CCAFS-WA Program, outputs developed from the CSA prioritization process (CSA-PF) in Mali were used to guiding CSA investment planning.
Research Outputs: Cf. outcome case also reported by CIAT
Research Partners: Cf. outcome case also reported by CIAT
Activities that contributed to the outcome: Cf. outcome case also reported by CIAT
Non-research Partners: Cf. outcome case also reported by CIAT
Output Users: Cf. outcome case also reported by CIAT
How the output was used: Cf. outcome case also reported by CIAT
Evidence of the outcome: Cf. outcome case also reported by CIAT
References: Cf. outcome case also reported by CIAT
The primary 2019 outcome indicator that this case study is contributing to: FP1 Indicator: # 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 FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs
Explanation of the link between your outcome story and the CCAFS indicators:
Year: 2015
Annexes uploaded: <Not defined>

Project: P88 - (Bioversity) Policies to support biological diversification of agricultural production systems for climate change adaptation and risk management

Start date (dd-MM-yyyy)	01-09-2014	**End date (dd-MM-yyyy)**	31-12-2015
Management liaison	F4 - Flagship 4	**Mgmt. liaison contact**	Thornton, Philip <p.thornton@cgiar.org>
Lead organization	BI - Bioversity International - Italy	**Project leader**	Halewood, Michael <m.halewood@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: 189 countries adopt guidelines to integrate GRFA in national climate change adaptation strategies

Outcome statement: First the FAO CGRFA, and then the FAO Council, adopted guidelines for countries to integrate genetic resources for food and agriculture into their national climate change adaptation strategies. CCAFS research outputs and targeted interactions with key boundary partners were important contributing factors to the development and adoption of the guidelines.

Research Outputs: CCAFS Discussion paper "Agricultural biodiversity in climate change adaptation planning: An analysis of the National Adaptation Programmes of Action".

Presentation "Crop diversity for climate change adaptation" at workshop "Integrating genetic diversity considerations into national climate change adaptation plans - Development of guidelines", April 2014.

Blog post "Promoting genetic diversity in agriculture through National Adaptation Plans", April 2014.

Side event "The role of agricultural biodiversity in national climate change adaptation planning: analyzing NAPAs", during 15th session of the CGRFA, January 2015.

Blog post "New guidelines for use of agrobiodiversity in climate change adaptation planning" based on side event, January 2015

Research Partners: The research component of the project consisted of desk research -- literature reviews, developing analytical framework, analysis of the 50 NAPAs, and follow-up GEF projects. This was conducted by a small group of scientists in Bioversity International. Three scientists provided peer review of the paper at various stages of its development: Alexandre Meybeck (UN FAO), Toby Hodgkin (Bioversity International) and Jacob van Etten (Bioversity International).

Activities that contributed to the outcome: Bioversity/CCAFS presented to a FAO-organized expert-consultation related to the Guidelines, April 2014; the presentation covered how agrobiodiversity assists adaptation to climate changes, and preliminary results of research on how agrobiodiversity is reflected in fifty NAPAs. We established the need for capacity strengthening for countries to integrate GRFA in adaptation strategies. Post-meeting, we submitted extensive comments in writing, and published a CCAFS blog post highlighting the issues. In 2015, we published the first full summary of our findings in a CCAFS discussion paper. To increase its influence, Bioversity/CCAFS organized an expert side event/panel during the FAO Commission meeting to present the paper to delegates, along with complementary presentations by the CGRFA Secretary, FAO experts, and three country representatives whose NAPAs include high use of biodiversity. Furthermore, we distributed the paper to delegates, and published a second blog post. Finally, we made statements to the Commission recommending adoption of the Guidelines.

Non-research Partners: Secretariat, Commission on GRFA of the UN FAO
Platform on Agrobiodiversity Research, the consultant organization working on the guidelines
Alexandre Meybeck, Senior Policy Officer on Agriculture, Environment and Climate Change, UN FAO
Ty Channa, Deputy Director, Agricultural Research and Development Institute Ministry of Agriculture, Forestry and Fisheries, Cambodia
Bounthong Bouahom, National Agriculture and Forestry Research Institute (NAFRI), Ministry of Agriculture and Forestry, Laos
Amadou Sidibé, Institut d'Economie Rurale, Mali

Output Users: Participants at expert meeting (workshop on "Integrating genetic diversity considerations into national climate change adaptation plans - Development of guidelines"), consultant drafters of the Guidelines, delegates to 15th session of the CGRFA; Secretariat of CGRFA.

How the output was used: The expert group, the Secretariat and its consultants working on the guidelines integrated comments/criticisms we provided regarding the guidelines. The delegates of 189 countries in the commission considered our recommendations, paper and side event when deciding to adopt the Guidelines.

Evidence of the outcome: Report of workshop "Integrating genetic diversity considerations into national climate change adaptation plans - Development of guidelines":
http://www.fao.org/fileadmin/templates/nr/documents/CGRFA/CCworkshopreport.pdf

CCAFS blog post highlighting Bioversity's contributions to the adoption by the Commission of the Guidelines:
https://ccafs.cgiar.org/blog/new-guidelines-use-agrobiodiversity-climate-change-adaptation-planning#.VswQeVL9xan

Voluntary Guidelines to Support the Integration of Genetic Diversity into National Climate Change Adaptation Planning: http://www.fao.org/3/a-i4940e.pdf

References: CCAFS Discussion paper:
https://cgspace.cgiar.org/bitstream/handle/10568/52991/CCAFS_WP95.pdf

Presentation entitled "Crop diversity for climate change adaptation":
http://www.slideshare.net/BioversityInternational/crop-diversity-for-climate-change-adaptation

Blog post entitled "Promoting genetic diversity in agriculture through National Adaptation Plans":
https://ccafs.cgiar.org/blog/promoting-genetic-diversity-agriculture-through-national-adaptation-plans#.VtWaMFL9xam

Side event presentation: http://www.slideshare.net/BioversityInternational/agricultural-biodiversity-in-climate-change-adaptation-planning

Side event flyer: http://www.fao.org/fileadmin/templates/nr/documents/CGRFA/SideEvents_CGRFA15.pdf

Blog post entitled "New guidelines for use of agrobiodiversity in climate change adaptation planning":
https://ccafs.cgiar.org/blog/new-guidelines-use-agrobiodiversity-climate-change-adaptation-planning#.VswQeVL9xan

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P90 - Scaling up climate-smart agriculture technologies and tools to benefit regional, national and community levels end-users in West Africa

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	RP WA - West Africa Region	**Mgmt. liaison contact**	Zougmore, Robert <R.Zougmore@cgiar.org>
Lead organization	ICRISAT - International Crops Research Institute for the Semi-Arid Tropics - India	**Project leader**	Parety, Samuel <S.Partey@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: The impact of climate information services in Senegal

Outcome statement: As of August 2015, seasonal forecasts are transmitted nationwide through 82 rural community radio stations and SMS, potentially reaching 7.4 million rural people across Senegal

Research Outputs: 1.Outcome case study report (https://cgspace.cgiar.org/rest/bitstreams/59295/retrieve)
2.Reaching more farmers-innovative approaches to scaling up CSA (https://ccafs.cgiar.org/publications/reaching-more-farmers-innovative-approaches-scaling-climate-smart agriculture#.VtAndsYrEuQ)
3.Reporting on climate change: developing capacity in Senegal's media (https://ccafs.cgiar.org/blog/reporting-climate-change-developing-capacity-senegal%E2%80%99s-media#.VtAoycYrEuQ)
4.There once was a woman named Mariama (https://ccafs.cgiar.org/blog/there-once-was-woman-named-mariama#.VtApjcYrEuQ)
5. The peanut farmer turns to a cell phone (http://www.npr.org/sections/goatsandsoda/2015/12/03/456194983/this-peanut-farmer-turns-to-a-cellphone-and-prayer-for-a-top-crop)

Research Partners: ISRA/ANACIM

Activities that contributed to the outcome: CCAFS scientists collaborated with the Senegalese National Meteorological Agency to develop downscaled climate information services and enhance the capacity of partners who are tasked to communicate climate information to farmer:
ANACIM produces CI during the rainy season and is responsible for transmitting it directly to the MWG, rural radios, the Rural Development Departmental Services (SDDR) and farmers. Following a training of the 82 radio journalists by ANACIM on the jargon of climate and on the understanding of the seasonal forecast, climate information services across the rainy season are now transmitted as special radio programs in the 14 administrative regions of Senegal. The interactive nature of the radio program allows listeners to revert with their feedback including additional information, views, and requests of clarification. This scaling up of CIS has been possible thanks to the partnership between CCAFS, ANACIM and URACS with each stakeholder playing a specific enabling and complementary role.

Non-research Partners: ANACIM (Agence Nationale de l'Aviation Civile et de la Météorologie du Senegal)
Union des Radios Associatives et Communautaires du Sénégal (URACS)
Agriculture Directorate, Ministry of Agriculture and Rural Equipment

Output Users: ANACIM as the main public provider of climate information services
Ministry of agriculture of Senegal as key user of the CIS to guide agricultural planning and capacitate ground extension agents
URACS as key media disseminating information that is relevant to their radio audiences
Agricultural development projects and programs

How the output was used: Farmers used the climate information received from the radio broadcast programs to planning their farm management (type of crop and variety, sowing date, weeding, fertilizers application dates, harvest period, etc.).
The Ministry of agriculture used the seasonal forecast to decide on adaptation measures for agriculture and food security

Evidence of the outcome: Acknowledgment letters and emails from rural radios and from URACS
Letter of ANACIM to the Ministry of Agriculture forwarding the seasonal forecast information for 2015 rainy season
Impact assessment study on communicating seasonal climate forecasts in Kaffrine, Diourbel, Louga, Thies and Fatick regions in Senegal. (Lo and Dieng 2015)

References: CCAFS. 2015. The impact of Climate Information Services in Senegal. CCAFS Outcome Study No.3. Copenhagen: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Available online at: www.ccafs.cgiar.org

Lo HM, Dieng M. 2015. Impact assessment of communicating seasonal climate forecasts in Kaffrine, Diourbel, Louga, Thies and Fatick (Niakhar) regions in Senegal: Final Report for CCAFS West Africa Regional Program.

R. Zougmoré, O. Ndiaye, 2015. Scaling up climate smart information services to guiding climate risk management by farmers in Senegal. pp: 56-60. In: Westermann O, Thornton P, Förch W. 2015 (Eds.), Reaching more farmers – innovative approaches to scaling up climate smart agriculture. CCAFS Working Paper no. 135.

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Case study senegal.pdf

Outcome case study #2

Title: National Climate-Smart Agriculture and Food Security Action Plan (2016 - 2020) developed for Ghana

Outcome statement: CCAFS science was used by the Ghana science-policy dialogue platform and the Ministry of Food and Agriculture (MOFA) to design and implement the National Climate-Smart Agriculture and Food Security Action Plan (2016-2020).
This is an implementation framework for an effective development of climate-smart agriculture in the ground. It formulates specific strategies that will contribute developing climate-resilient agriculture and food systems for all agro-ecological zones, as well
as the human resource capacity required for a climate-resilient agriculture promotion in Ghana

Research Outputs: Working paper on the Action plan document with sections covering: (1) Linkage Between the Action Plan and Policy Documents, (2) Program Areas of the Agriculture and Food Security Focus Area, (3) Cross cutting issues, (4) Implementation arrangement, (5) Monitoring & Evaluation, (6) Conclusion and way forward, annex 1: Program areas, corresponding activities and lead actors.

Blog on the official launching:

Research Partners: CSIR-Ghana

Activities that contributed to the outcome: The methodological approach consisted into: (1) data collection through desk reviews, interviews and small group meetings, (2) Interviews and consultations of relevant institutions, (3) Consultations workshops with various stakeholders, (4) data analysis and report writing. The participatory workshops were organized to bring representatives of stakeholder organizations together to discuss various components of the action plans and prepare inputs. These stakeholder consultation workshops were used to carry out prioritization of the action areas by the agro-ecological groupings. In addition, a validation workshop was held to provide a platform for a final discussion of the draft Action Plan with key stakeholders.
Through such inclusive and participatory approach, the final results were accepted as consensual and ready for implementation, from the high policy level down to the community one.

Non-research Partners: MoFA, MESTI, National Development Planning Commission

Output Users: Ministry of Food and Agriculture (MOFA)
Ministry of Environment, Science, Technology and Information (MESTI)
Rural sector development ministries
NGOs
local government authorities, Farmers organizations, small-scale agro-entrepreneurs
Financial and technical partners for the agricultural sector

How the output was used: The Action Plan is a basis for ground implementation of CSA as it has defined implementation programmes in the respective Ghana agro- ecological zones. Proposed activities provide a useful framework to operationalize the eight programme areas of the Agriculture and Food Security focus area of the National Climate Change Policy.

Evidence of the outcome: There is a published book (attached as annex) and a working paper available at http://hdl.handle.net/10568/69000.

References: Essegbey GO, Nutsukpo D, Karbo N and Zougmoré R. 2015. National Climate-Smart Agriculture and Food Security Action Plan of Ghana (2016-2020). Working Paper No. 139. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Available online at: www.ccafs.cgiar.org

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: ACTION PLAN final -press.pdf

Outcome case study #3

Title: ECOWAS now effectively mainstreaming CSA into regional agricultural policies through CSA alliance and implementation framework

Outcome statement: ECOWAS (+member-countries) have used the scientific and technical knowledge and information generated by CCAFS to develop a CSA implementation framework and an CSA alliance for West Africa. As member of the technical team of the high level forum, the CCAFS-WA RPL used CCAFS science to backstopping various technical documents of the forum. Moreover, CCAFS-WA led the development of a paper that was used to inform the CSA intervention framework and to guiding the framing of the West Africa CSA alliance.

Research Outputs: Working paper No118 on the Overview of the Scientific, Political and Financial Landscape of Climate-Smart Agriculture in West Africa: crop production, livestock, fisheries, water, forestry/Agroforestry

Intervention Framework for the Development of Climate-Smart Agriculture under the West Africa Regional Agricultural Policy (ECOWAP/CAADP) implementation Process

West Africa Climate-Smart Agriculture Alliance (WACSAA): framework document

Research Partners: IWMI, IFPRI, ILRI, ICRAF, ICRISAT, CORAF, University of Ibadan

Activities that contributed to the outcome: (1) CCAFS-WA RPL was actively involved in the technical team put in place by ECOWAS to lead the preparation of background documents for the CSA forum, thus has backstopped the team on various knowledge on CSA and implications for agriculture in West Africa region.

(2) CCAFS-WA led the development of a paper on the Scientific, Political and Financial Landscape of Climate-Smart Agriculture in West Africa. This covered 5 sub-sectors: crop production, livestock, fisheries, water, forestry/Agroforestry. The paper was used a background document to inform the forum framework for intervention and for setting up a CSA alliance.

(3) The contributing scientists from IWMI, IFPRI, ILRI, ICRAF, ICRISAT, CORAF, and Ibadan University gave keynotes to introduce the forum (250 participants). This was facilitated by CCAFS-WA RPL.

(4) CCAFS has received more than 150 visitors and distributed about 500 documents. The book published in English and French was downloaded 1500 times.

Non-research Partners: Hub Rural
ECOWAS (Agriculture Directorate)

Output Users: ECOWAS
Hub Rural
UEMOA
CILSS
Government Ministries from Rural Development
Parliamentarians (Rural development commission)
NGOs
Donors
NARS

How the output was used: The knowledge on the state of CSA in WA as well as its future has guided ECOWAS and WA partners to deliberate on future domains for the promotion of CSA in West Africa. Its helped design a suitable CSA alliance and an implementation framework that fits well with the ECOWAP.

Evidence of the outcome: High level forum of CSA stakeholders in West Africa (http://www.hubrural.org/Forum-CEDEAO-de-Haut-Niveau-des,12409.html?lang=en)

ECOWAS and member-countries now effectively mainstreaming CSA into regional and national agricultural plans and policies through the CSA alliance (WACSAA) and implementation framework (https://ccafs.cgiar.org/blog/alliance-climate-smart-agriculture-launched-west-africa#.VrHKv8YrGpo)

References: Robert Zougmoré, Alain Sy Traoré and Yamar Mbodj (Eds.), 2015. Overview of the Scientific, Political and Financial Landscape of Climate-Smart Agriculture in West Africa. Working Paper No. 118. CGIAR Research Program on Climate Change, Agriculture and Food Security. Available online at: www.ccafs.cgiar.org

Letter of thanks from Hub Rural

http://www.hubrural.org/Forum-CEDEAO-de-Haut-Niveau-des,12409.html?lang=en

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Working paper_Overview of CSA.pdf

Project: P91 - Global policy engagement

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	CU - Coordinating Unit	**Mgmt. liaison contact**	Vermeulen, Sonja <s.vermeulen@cgiar.org>
Lead organization	KU - Københavns Universitet - Denmark	**Project leader**	Vermeulen, Sonja <s.vermeulen@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Agriculture is not excluded from the post-2015 UNFCCC agreement announced in Paris

Outcome statement: CCAFS worked with policy and research partners towards ensuring that agriculture was not excluded from the post-2015 UNFCCC agreement announced in Paris in December 2015. Food security was given prominence in the agreement, 80% of INDCs committed to action on agricultural mitigation, and 90% of INDCs that include adaptation selected agriculture as a priority sector for action.

Research Outputs: Hedger et al. 2015. Progress on agriculture in the UN climate talks: How COP21 can ensure a food-secure future.
Richards et al. 2015. How countries plan to address agricultural adaptation and mitigation: An analysis of INDCs.
Coffey et al. 2015. Expanding the contribution of early warning to climate-resilient agricultural development in Africa. CCAFS Working Paper no. 115.
Grace et al. 2015. Climate and Livestock Disease: assessing the vulnerability of agricultural systems to livestock pests under climate change scenarios. CCAFS Working Paper No. 116.
Mohan CV. 2015. Climate Change and Aquatic Animal Disease. CCAFS Working Paper No. 117.
Smith J. 2015. Crops, crop pests and climate change –why Africa needs to better prepared. CCAFS Working Paper No. 114.
Ramirez-Villegas J, Thornton PK. 2015. Climate change impacts on African crop production. CCAFS Working Paper No. 119.
Thornton et al. 2015. Climate change impacts on livestock. CCAFS Working Paper No. 120.

Research Partners: CIFOR, ICRAF, ILRI and CIAT provided inputs into the development of Kenya's Climate-Smart Agriculture Framework Program (CSA-FP), aimed at guiding investments into climate resilient and low carbon agriculture. As of July 2015, the CSA-FP was integrated into Kenya's Intended Nationally Determined Contribution (INDC) submission.
World Fish produced SBSTA submission on aquatic animal disease
ILRI produced SBSTA submission on livestock pests
Fera produced SBSTA submission on crop pests
CIAT and ILRI produced papers on climate change impacts on crops and livestock in Africa
IRI produced SBSTA submission on early warning systems
University of Copenhagen produced info note on progress on agriculture in the UN climate talks
University of Vermont and University of Copenhagen produced info note on INDCs analysis
University of Oxford supported development of Costa Rica INDC

Activities that contributed to the outcome: Activities which helped achieve this outcome include:
1. Provision of evidence on agriculture and food security under 1.5C and 2C futures to negotiators through the UNFCCC Structured Expert Dialogue.
2. Production of guide to UNFCCC Negotiations on Agriculture, which was widely disseminated amongst parties and observers
3. Four submissions to UNFCCC SBSTA Call on Agriculture in 2015
4. Technical assistance to parties including the African Group of Negotiators to prepare submissions to UNFCCC SBSTA
5. Technical assistance in developing INDCs, for example in Kenya and Costa Rica
6. Development and dissemination of policy briefs at key UNFCCC events, including SBSTA and COP21
7. Strategic presence at the COP and SBSTA, including side events with a range of partners to give prominence to developing country perspectives

Non-research Partners: Technical Centre for Agricultural and Rural Co-operation ACP-EU (CTA) and FarmingFirst co-developed guide to agriculture in the UNFCCC negotiations.
Common Market for Eastern and Southern Africa (COMESA) convened meeting of the African Group of Negotiators Expert Support group.

Output Users: Outputs were used by parties and observers to the UNFCCC, and informed their perspectives on how agriculture should be addressed in the Paris agreement.

How the output was used: Outputs informed parties inputs into various UNFCCC processes, including submissions/interventions on issues related to agriculture in the SBSTA, preparation of INDCs ahead of COP21, as well as discussions on agriculture in different parts of the UNFCCC.

Evidence of the outcome: Food security is given prominence in the Paris agreement, 80% of INDCs commit action on agricultural mitigation, and 90% of INDCs that include adaptation select agriculture as a priority sector for action.

Please see annex for more evidence on each of the stated activities.

References: Meadu V, Coche I, Vermeulen S, Friis AE. 2015. The Paris Climate Agreement: what it means for food and farming. CCAFS Info Note. Copenhagen, Denmark: CCAFS.
Hedger et al. 2015. Progress on agriculture in the UN climate talks: How COP21 can ensure a food-secure future.
Richards et al. 2015. How countries plan to address agricultural adaptation and mitigation: An analysis of INDCs.
Coffey et al. 2015. Expanding the contribution of early warning to climate-resilient agricultural development in Africa. CCAFS Working Paper no. 115.
Grace et al. 2015. Climate and Livestock Disease: assessing the vulnerability of agricultural systems to livestock pests under climate change scenarios. CCAFS Working Paper No. 116.
Mohan CV. 2015. Climate Change and Aquatic Animal Disease. CCAFS Working Paper No. 117.
Smith J. 2015. Crops, crop pests and climate change –why Africa needs to better prepared. CCAFS Working Paper No. 114.

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators: In this case, it is the global climate policy framework, which is taking into consideration climate smart practices and strategies for the agricultural sector.

Year: 2015

Annexes uploaded: Project 91 Evidence for outcome case.docx

Project: P101 - FP1 Leader: CSA Engagement, Synthesis and Supporting Activities

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2018
Management liaison	F1 - Flagship 1	**Mgmt. liaison contact**	Jarvis, Andy <a.jarvis@CGIAR.ORG>
Lead organization	FP1 Leader - FP1 Leader	**Project leader**	Jarvis, Andy <a.jarvis@CGIAR.ORG>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: High Level stakeholders engaged in prioritizing CSA portfolios and guiding new investments in Mali (FP1/WA)
Outcome statement: Outputs from the CSA prioritization process developed by CIAT, CCAFS FP1 and CCAFS-WA through the collaboration and leadership of national stakeholders (AEDD and the NGO AMEDD on behalf of the CCASA National platform),led to: an action plan to foster scaling of the prioritized CSA portfolios; USD 5,177250 investment by Sahel Eco (NGO), AMEDD and AMEPPE for implementation in three regions;Helvetas Swiss' intension to mainstream one CSA portfolio, and official support request from the Director of Agriculture and Deputees commission.
Research Outputs: * List of prioritized practices of three agro ecological zones of Mali (Power Point Summary Presentation). * Cost/Benefit Portfolio Analysis Report * Policy Brief * Info Note * Working Paper in prep.
Research Partners: * Mali CCASA platform (led and coordinated the process in collaboration with AMEDD); * NGO AMEDD (supported the economic analyses). * Two universities and IER (NARS) were involved as expert in the process. * CIAT proposed the CSA prioritization framework previously tested in Guatemala and provided methodological support for its adaptation to Mali's context.
Activities that contributed to the outcome: * CCASA National platform facilitated by AMEDD. * First Prioritization workshop (November 2014): identification of top suitable CSA options and externalities. (attendees: national government: Direction of Agriculture, AEDD,Local government: Region of Sikasso, research: University, IER CIRAD, Donors: EU, Sweden Embassy, NGOs: Helvetas. * Data gathering and Cost/benefit analysis of prioritized options. * Final workshop (October, 2015): co-development of 2 CSA portfolios (30 high level decision makers from the Malian government, representatives from farmer associations, universities, NARS, NGOs and donors). * Business breakfast (October 23, 2015) : high level broadcasting of the PF results to 9 high level stakeholders. * Visit to the Prime ‘Minister’s Office. * National television coverage of the event. * High level event at the Malian parliament to share the results of the prioritization exercise and trigger policy action.

Non-research Partners: * CCASA National platform: https://cgspace.cgiar.org/rest/bitstreams/37218/retrieve
* AMEDD
* Helvetas Swiss intercooperation

* Attendees to the Business Breakfast:National Directors of Agriculture, Water and Forests, Food Security Commissioner, Executive secretariat of the national Committee of Agronomic Research (CNRA) and representatives from the EU, Sweden embassy, Helvetas Suisse, WA GERES (NGO energy and climate focused) and the Green Climate Fund.

Output Users: * Government: AEDD (Min. of Env), Direction National de l'Agriculture (Min. of Ag), Sikasso (local)
* NGOs AMEDD (local) Sahel Eco (International) Helvetas (International)
* Research: IER, Universities (national)
* Farmer organizations :AOPP
* Donors: Climate Fund Secretary, European Union, Sweden Embassy

How the output was used: Mainstreaming:
2016 implementation by Sahel Eco,AMEDD and AMEPPE (5177250 USD) of CSA options in the Mopti, Segou and Sikasso regions (IITA-USAID project); and by Helvetas (1priotized portfolio) within their 2014-2020 program.

*UNEP: interest in business cases assessments.

*Swedish: shared with 15 partners and exploring new agreement with Mali.

Evidence of the outcome: Letter from de national Director of Agriculture
IITA-SahelEco-USAID project and 2016 workplan.
Helvetas project under construction.

Video showing engagement from: Climate Fund, Food security secretariat and Permanent Assembly of Agriculture's chamber (CD room).

Follow up in 2016 to the solemn request from the Rural Development Committee (Parliment) to AMEDD.

References: * Business Breakfast Presentation.
* Info Note
* Cost/Benefit Analysis Report (in revision)

* Blog Climate-smart solutions for Mali: https://ccafs.cgiar.org/blog/climate-smart-solutions-malian-sahel#.VplZsPkrLIV
*Photos: https://www.flickr.com/photos/cgiarclimate/sets/72157649473003478
* Video showing engagement from: Climate Fund, Food security secretariat and Permanent Assembly of Agriculture's chamber (CD room)- CCAFS Youtube channel

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: References and Evicence FP1 & WA 2015 Outcome Story.pdf

Project: P108 - National and regional partnerships to support integration of climate change in agriculture and food systems

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	RP EA - East Africa Region	**Mgmt. liaison contact**	Radeny, Maren <M.Radeny@cgiar.org>
Lead organization	ILRI - International Livestock Research Institute - Kenya	**Project leader**	Radeny, Maren <M.Radeny@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: East African countries integrate Climate-Smart Agriculture into their Intended Nationally Determined Contributions (INDCs)

Outcome statement: With support from CCAFS EA, ICRAF, ILRI, CIFOR, and CIAT, Kenya, Uganda and Tanzania have developed Climate-Smart Agriculture Framework Programs (CSA-FP) to guide investments for climate resilient and low carbon agriculture. Across the three countries, the CSA-FP was integrated into the Intended Nationally Determined Contributions (INDCs) that were submitted to the UNFCCC in 2015. The Kenya INDC, for example, seeks to reduce 30% of the country's GHG emissions by 2030 relative to a BAU scenario of 132 Mt CO2 eq.

Research Outputs: The process of developing "targetCSA" a tool for prioritizing CSA practices at county level led by CIFOR and ILRI involved a series of engagements and key informant interviews which increased awareness on CSA issues in Kenya. CCAFS Working Paper 90 on "Evidence and policy implications of climate-smart agriculture in Kenya" includes input from national stakeholders from the ministries, research institutions and development practitioners. During the national technical working sessions, research partners from the CGIAR shared their tools and research findings which provided the current and historical perspectives of agriculture sector programs and provided an analysis of options for agricultural sector growth in a changing climate. The 'CSA Plan' being developed by ICRAF and CIAT will be used to support the prioritization and targeting of CSA. These processes build on national engagement processes held in the focus countries initiated in 2011-12 on identifying priority actions for agriculture in a changing climate.

Research Partners: International Livestock Research Institute (ILRI),
Center for International Forestry Research (CIFOR)
World Agroforestry Centre (ICRAF)
International Center for Tropical Agriculture (CIAT)

Activities that contributed to the outcome: Workshops and face to face meetings held in the countries were critical for building partnerships with key government institutions, and also led to identification of entry points for climate-smart agriculture in national policies, strategies and programs. In Kenya, for example, a key science-policy engagement has been the CCAFS led process on “Taking Forward Kenya’s National Climate Change Action Plan (NCCAP) 2013-2017’’. Apart from technical support by CCAFS and other CGIAR partners in the working sessions on developing the national CSA-FPs, officials from the Kenya ministry of environment visited the GHG laboratory facilities at ILRI. Others included engagements with DFID, GIZ, County Governments, Private sector in Kenya to build consensus for wider policy changes. Three key Principal Secretaries from Kenya Ministries of Environment, Livestock and Fisheries participated in the national validation workshop, including other stakeholders from Academia, county governments,NGOs, research institutions and the private sector, demonstrating strong government support for CSA-FP.

Non-research Partners: Ministry of Environment, Water and Natural Resources- Kenya
Ministry of Agriculture, Livestock and Fisheries - Kenya
Ministry of Agriculture Food Security and Cooperatives - Tanzania
Vice President’s Office - Tanzania
Ministry of Agriculture, Animal Industry and Fisheries - Uganda
Ministry of Water and Environment - Uganda
The Common Market for Eastern and Southern Africa (COMESA)
East African Community (EAC)
Department for International Development (DFID)

Output Users: Ministries of Environment and Agriculture in Kenya, Uganda and Tanzania

How the output was used: To inform the development of the country Climate-Smart Agriculture Framework Programs (CSA-FP) and subsequent integration into the INDCs submitted to the UNFCCC.

Evidence of the outcome: The INDCs build on consultative processes around the development of the CSA-FPs. The INDCs identify mitigation and adaptation components referenced in the CSA-FPs where capacity building for GHG inventories with CIFOR and ILRI is critical. A prioritization tool ‘targetCSA’ is now available to support decision making for targeting CSA interventions.

References: Chesterman S, Neely C, (Eds.). 2015. Evidence and policy implications of climate-smart agriculture in Kenya. CCAFS Working Paper no. 90. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Journal paper - https://ccafs.cgiar.org/publications/how-target-climate-smart-agriculture-concept-and-application-consensus-driven-decision#.Vs_yNPmqpBc

Country CSA-FPs
Kenya - http://canafrica.com/wp-content/uploads/2015/06/Kenya-CSA-Program-.pdf
Uganda – http://canafrica.com/wp-content/uploads/2015/06/Uganda-CSA-Program.pdf
Tanzania - http://canafrica.com/wp-content/uploads/2015/06/Tanzania-CSA-program.pdf

Links to INDCs as submitted to the UNFCCC
Kenya -
http://www4.unfccc.int/submissions/INDC/Published%20Documents/Kenya/1/Kenya_INDC_20150723.pdf
Submitted on 24/07/2015

Uganda -
http://www4.unfccc.int/submissions/INDC/Published%20Documents/Uganda/1/INDC%20Uganda%20final%20%2014%20October%20%202015,%20minor%20correction,28.10.15.pdf
Submitted on 28/10/2015

Tanzania -
http://www4.unfccc.int/submissions/INDC/Published%20Documents/United%20Republic%20of%20Tanzania%E2%80%8B/1/INDCs_The%20United%20Republic%20of%20Tanzania.pdf
Submitted on 29/09/2015

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P110 - Integrated assessments of climate change and adaptation impacts on agricultural systems using AgMIP and GYGA protocols in SSA and SA

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	RP EA - East Africa Region	**Mgmt. liaison contact**	Kinyangi, James <j.kinyangi@cgiar.org>
Lead organization	ICRISAT - International Crops Research Institute for the Semi-Arid Tropics - Kenya	**Project leader**	Claessens, Lieven <l.claessens@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1
Title: Hundreds of farmers adopting sorghum-legume climate-smart cropping system in semi-arid Kenya
Outcome statement: At least 600 smallholder farmers have adopted a sorghum-legume (pigeonpea/cowpea) cropping system as alternative for maize-beans in Wote, Makueni, Kenya.
Research Outputs: • New drought tolerant varieties of sorghum, cowpea, pigeon pea and green gram developed by ICRISAT and KALRO in collaboration with the private sector (seed) and released by the government of Kenya. • Participatory 'mother and baby' trials.
Research Partners: • Kenya Agricultural and Livestock Research Organization (KALRO) • Ministry of Agriculture, Livestock and Fisheries of the Govt of Kenya • Agricultural Extension department of Govt of Kenya in Makueni county • Kwamboo farmer self-help group • CCAFS East Africa
Activities that contributed to the outcome: • Participatory 'mother and baby' trials. • Training of extension officers on climate information, seasonal forecasts and climate-tailored agro-adviseries
Non-research Partners: • Ministry of Agriculture, Livestock and Fisheries of the Govt of Kenya • Agricultural Extension department of Govt of Kenya in Makueni county • Kwamboo farmer self-help group
Output Users: • Agricultural Extension department of Govt of Kenya in Makueni county • Kwamboo farmer self-help group
How the output was used: • Through participatory trials of different sorghum-legume systems, farmers choose and adopted the Seredo Sorghum – cow pea or pigeon pea system as an alternative to maize-beans.
Evidence of the outcome: http://news.trust.org//item/20150220084329-y056s/ Interviews with agricultural and extension officers on 3/2/2016: https://ccafs.cgiar.org/news/improving-adaptive-capacity-farmers-eastern-kenya#.Vta_puZu1Rp

References: http://news.trust.org//item/20150220084329-y056s/
Interviews with agricultural and extension officers on 3/2/2016: https://ccafs.cgiar.org/news/improving-adaptive-capacity-farmers-eastern-kenya#.Vta_puZu1Rp

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P111 - FL3 synthesis and supporting activities

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	F3 - Flagship 3	**Mgmt. liaison contact**	Wollenberg, Lini <Lini.wollenberg@uvm.edu>
Lead organization	FP3 Leader - FP3 Leader	**Project leader**	Wollenberg, Lini <Lini.wollenberg@uvm.edu>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Scaling climate-smart dairy practices in Kenya (with P13)

Outcome statement: In the third year of a sustained CCAFS initiative to leverage climate finance to promote sustainable development in the dairy sector of Kenya, CCAFS research was used for the dissemination of climate-smart feeding and husbandry practices among 600,000 farmers who are members of six producers' organizations (see output users). As a result of the project, the Livelihoods Fund and Brookside Dairy have invested over USD 3.5 million in climate-smart dairy development in Kenya, in a project to benefit 30,000 farmers.

Research Outputs: Four research outputs were key to this outcome:
1. Journal article (in prep): Systematic review on best climate-smart dairy practices, key barriers and success factors to adoption
2. Journal article (in prep): Scaling up and out of Climate Smart Agriculture through Value Chains, Policy Engagement and Information and Communication Technologies Approaches
3. CCAFS working paper: A review of the latest developments in livestock NAMAs
4. A NAMA investment proposal demonstrating proof of concept (this is in draft form for internal consultation)

Research Partners: ICRAF: Project leader (2015-onwards), project P13
ILRI: literature provision and expert interviews for best climate-smart dairy practices
UNIQUE Forestry and Land Use: Research leader
Dairy Research Institute: provided literature
FAO: Partner in capacity building/training for the Ministry of Agriculture, Livestock and Fisheries on NAMAs

Activities that contributed to the outcome: This outcome is the result of 3 years of research and engagement by CCAFS and UNIQUE Forestry and Land Use with ministries, donors, dairy companies, and producers' organizations. Activities included:
• Multiple meetings with the State Department of Livestock and MoALF during 2014 and 2015.
• A partnership established with the Mt. Elgon smallholder dairy development and watershed protection project, funded by the Livelihoods Fund (Danone) and Brookside Dairy. CCAFS research supported the design of this project.
• During a workshop organized together with Kenya Dairy Board and its member associations (Sept. 2015), project leaders presented the results of the systematic review. Implications for partners involved in the implementation initiatives and research projects were discussed.
• Project representatives met with the World Bank (Stephane Foreman) to discuss NAMA alignment with and potential financing by the new World Bank climate-smart agriculture programme, to be started end of 2016.

Non-research Partners: 1. World Bank: Supporting the project appraisal of the Climate-Smart Agriculture Program, which will have a strong livestock component
2. State Department of Livestock at the Ministry of Agriculture, Livestock and Fisheries (MoALF): Alignment of mitigation objectives in policy development
3. Kenya Dairy Board: Workshop organization, dissemination of best practices

Output Users: Kenya National Farmers' Federation (KENAFF)
Kenya Livestock Breeders Organization (KLBO)
Kenya Dairy Producers Association (KDPA)
Kenya National Milk Producers Organization (KENDAPO)
Association of Kenyan Feed Manufacturers (AKEFEMA)
Dairy Traders Association
Vi Agroforestry
Brookside Dairy (dairy processor)
New Kenya Co-operative Creameries (NewKCC) (dairy processor)
IFAD Smallholder Dairy Commercialization Programme

How the output was used: Brookside Dairy, NewKCC, Vi Agroforestry incorporated findings from the research outputs (related to best practices, monitoring, feasibility) into the design of their new dairy development program. The Kenyan government and producers' organizations used findings from the systematic review to disseminate information about best practices to dairy farmers.

Evidence of the outcome: - Announcement of the smallholder dairy development and watershed protection project in Kenya by the Livelihoods Fund and Danone in SBSTA side event presentation in Bonn in June 2015, also at http://www.livelihoods.eu/happy-new-year-2016/
-Participation in dairy sector workshop organized by Dairy Board and associations: http://blog.worldagroforestry.org/index.php/2015/10/15/steps-towards-nationally-appropriate-mitigation-actions-for-kenyas-dairy-sector/
-Dairy NAMA investment proposal (attached)

References: van Dijk S, Tennigkeit, T, Wilkes A. Climate-smart livestock sector development: the state of play in NAMA development. CCAFS Working Paper No. 105. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. Available online at: www.ccafs.cgiar.org

Dairy NAMA investment proposal, attached. NOT YET FOR PUBLIC DISSEMINATION due to political considerations.

The primary 2019 outcome indicator that this case study is contributing to:
FP3 Indicator: # 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.

Explanation of the link between your outcome story and the CCAFS indicators: The Livelihoods Fund and Brookside Dairy have invested over USD 3.5 million in climate-smart dairy development plan in Kenya, to benefit 30,000 farmers.

Year: 2015

Annexes uploaded: Dairy NAMA investment proposal.pdf

Outcome case study #2

Title: Plan Vivo adopts greenhouse gas accounting methodology for smallholders

Outcome statement: A low-cost, efficient greenhouse gas and soil carbon accounting method and tool developed by CCAFS and University of Edinburgh was adopted by Plan Vivo (a payment for ecosystem services scheme for smallholder farmers). It will, for the first time, allow Plan Vivo projects, which sell approximately $3.2 million in carbon credits each year* to benefit smallholder farmers and receive credits for soil carbon sequestration. CCAFS contributed 67% of the support for SHAMBA's development.

Research Outputs: A package of research outputs was critical to this outcome:
• The SHAMBA tool, which integrates the Rothamstead Carbon Model with models for other agricultural greenhouse gas sources and sinks into a single tool with a simple user interface. It enables users with minimal technical expertise to develop estimates of mitigation benefits from changes to smallholder agricultural practices. https://shambatool.wordpress.com/
- The SHAMBA methodology, which describes the technical specifications of the tool and model.
• The final output of this project was a Plan Vivo Approved Approach for climate benefit quantification. In order to earn carbon credits through Plan Vivo, projects must either develop an approach for quantifying the GHG impact of the project, or adopt approaches already approved by Plan Vivo. In partnership with Plan Vivo, the SHAMBA tool has gone through the review and approval process, and is in the final stages of approval as a Plan Vivo Standard.

Research Partners: University of Edinburgh
World Agroforestry Center (contributed to initial development of tool)

Activities that contributed to the outcome: Most critical to the outcome was continuous engagement with Plan Vivo-both the Plan Vivo Foundation and several Plan Vivo projects- throughout the research process. For example, project partner Jeff Wells (Edinburgh University) worked with Trees for Global Benefits in Uganda (A CCAFS F3 field site and partner) to help them learn about and adapt SHAMBA for use in monitoring their project. CCAFS worked with Trees for Global Benefits for the past three years on a project with EcoAgriculture Partners. Outreach to other standards and certifiers (such as Verified Carbon Standard) and consistent dissemination by CCAFS has also increased interest in the tool. For example, CCAFS funded the development of a SHAMBA website (https://shambatool.wordpress.com/) and has publicized SHAMBA at numerous CCAFS events.

Non-research Partners: Bioclimate
LTS International
Ecometrica
Ecosystem Services for Poverty Alleviation (ESPA)

Output Users: Plan Vivo was a partner and output user in this project, as they have been involved in testing and further developing the SHAMBA methodology for use in their projects.
Scolel'te Project (Mexico)
Trees for Global Benefits Project (Uganda)
Sofala Community Carbon Project (Mozambique)

How the output was used: Plan Vivo adopted the SHAMBA tool and methodology as an approved approach for smallholder agricultural projects to earn carbon credits. Current Plan Vivo projects Scolel'te, Trees for Global Benefits, and Sofala used SHAMBA for ex-post assessments of GHG mitigation. These projects cover 23700ha, include 7312 farmers and sequester 170000tCO2e annually.

Evidence of the outcome: http://peoplefoodandnature.org/blog/shamba/
SHAMBA in the Technical Library for Plan Vivo projects: http://www.planvivo.org/our-approach/technical-library/
The Plan Vivo/SHAMBA/CCAFS partnership is noted in Plan Vivo's technical report (http://www.planvivo.org/docs/Annual-Report-FY2014-2015.pdf) and on their website: http://www.planvivo.org/partnerships/donors-and-grant-support/
*Source: Plan Vivo FY2014-2015 report (http://www.planvivo.org/docs/Annual-Report-FY2014-2015.pdf) Plan Vivo projects sold 386,000 credits in 2014 at an average price of $8.5 per credit.

References: Woollen E, Berry N, Vross A, Hagdorn M, Hughes M, Ryan CM. 2014. SHAMBA V. 1.0 Methodology. University of Edinburgh. Available online at https://shambatool.wordpress.com and http://hdl.handle.net/10568/67025

The primary 2019 outcome indicator that this case study is contributing to:
FP3 Indicator: # millions of hectares targeted by research-informed initiatives for scaling up low-emissions agriculture and preventing deforestation

Explanation of the link between your outcome story and the CCAFS indicators: The mitigation projects using SHAMBA target 23,700 hectares.

Year: 2015

Annexes uploaded: <Not defined>

Project: P112 - Developing Climate Smart Villages in LAM.

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	30-12-2016
Management liaison	RP LAM - Latin America Region	**Mgmt. liaison contact**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Lead organization	RPL LAM - RPL Latin America	**Project leader**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Climate forecasts tailored to the farmers' needs for better decision making and improve their practices.

Outcome statement: The Local Agroclimatic Bulletin, published after each one of the 4 Local Technical Agroclimatic Committees (MTA in Spanish) established in Colombia, have become a key input for farmers and stakeholders for decision making and changing in their practices: sowing periods, and selecting crops and zones to farm; according to the recommendations and climate forecasts for their area, discussed in the MTAs. These new practices and the decisions taken have an impact on reducing the risks of agricultural production for farmers.

Research Outputs: Training Manual for develop Local Technical Agroclimatic Committees in Colombia (Mayorga & Boshell, 2015a)

Proposal of a strategy to scale-up the development of Local Technical Agroclimatic Committees in Colombia (Mayorga & Boshell, 2015b)

Report resume of the Local Technical Agroclimatic Committees in Cauca and Cordoba, Colombia (Mayorga & Boshell, 2015c)

Local Agroclimatic Bulletins, developed by the MTAs and published by CCAFS (CCAFS, 2015)

Research Partners: Colombian Agricultural Research Corporation (Corpoica): Coordination and implementation of of Cordoba's Local Technical Agroclimatic Committee.

Cordoba Univesity, active member of the MTA in Cordoba developing parallel research to support MTA inputs on climate analysis.

International Center for Tropical Agriculture (CIAT) in supporting CCAFS with the development of MTA in Magdalena.

Institute of Hydrology, Meteorology and Environmental Studies of Colombia (IDEAM): produced climate forecasts at national and regional level used as inputs for downscaling.

Activities that contributed to the outcome: The MTAs are being developed with the participation of multiple local stakeholders such as public institutions, producers' associations, universities and private sector, to share and discuss the results of the modelling of local climate and local weather forecast on the long and short-term. The participants also discuss adaptation measures by crops and zones, and deliver the inputs for the Bulletin, with conclusions and recommendations of the committees.

The Bulletins are published by CCAFS and delivered through internet and socialmedia channels and hard copies printed by the local partners. Extension services technicians have stated that the bulletins are key drivers of improvement in the yields and saving in crops, by changing the sowing dates and following the recommendations for better farming practices.

The inclusion of the MTAs in one of the adaptation measures of the Colombia's INDC is a key evidence of the trust of the government in the MTA approach.

Non-research Partners: Partners engaged with the MTA development: Ministry of Agriculture and Rural Development (MADR), National Rice Growers Federation (Fedearroz), National Federation fo Cereals and Legumes Growers (Fenalce), Association of Banana Growers of Magdalena and La Guajira (Asbama) and Foundation for the Development of Las Piedras Basin in Cauca.

Stakeholders who participate on the MTAs: Colombian Federation of Cotton (Conalgodón), Universidad de Córdoba, Colombian Agricultural Institute (ICA), Regional Environmental Authorities (CARs) such as CRC (Cauca), CVS (Córdoba) and Corpomojana (Sucre).

Output Users: Extension services Technichans
Farmer's associations
Local extension services (UMATA in Spanish)
Ministry of Agriculture and Rural Development (MADR) and regional and local secretariats of agriculture

How the output was used: Extension services, farmer's associations and UMATAs used the Bulletins for planning and decide on crop types and zones. Government officers used the manual, reports and proposals to scale-up the MTA approach in other zones of the country, reaching up to 15 MTAs by 2030, as stated in the Colombian NDC.

Evidence of the outcome: Colombia's iNDC: Mentioning the MTAs as an adaptation commitment (page 9, bullet 10):
https://www.minambiente.gov.co/images/cambioclimatico/pdf/colombia_hacia_la_COP21/iNDC_ingles.pdf

Fund for the Financing the Agricultural Sector (Finagro): Mentioning the Bulletins as an approach to improve the competitiveness fo the agricultural sector https://www.finagro.com.co/productos-y-servicios/ISA/gesti%C3%B3n-de-riesgos-agropecuarios
Information and Communication Network of the Colombian Agricultural Sector (Agronet): Agroclimatic Bulletins http://www.agronet.gov.co/Paginas/Boletines-Agroclim%C3%A1ticos.aspx

References: Mayorga, R., Boshell, F. (2015a). Manual para orientar el establecimiento de las Mesas Técnicas Agroclimáticas en otras zonas del país. Bogotá DC: CCAFS. Available at https://ccafs.cgiar.org/sites/default/files/projects/attachments/Manual_para_orientar_establecimiento_MTA_en_Colombia.pdf
Mayorga, R., Boshell, F. (2015b). Propuesta de la estrategia para escalar la implementación de las Mesas Técnicas Agroclimáticas en otras zonas del país. Bogotá DC: CCAFS. Available at https://ccafs.cgiar.org/sites/default/files/projects/attachments/Propuesta_para_escalar_implementacion_MTA_en_Colombia.pdf
Mayorga, R., Boshell, F. (2015c). Consolidado de la Memorias de las Reuniones de las Mesas Técnicas Agroclimáticas en Cauca y Córdoba. Bogotá DC: CCAFS. Available at https://ccafs.cgiar.org/sites/default/files/projects/attachments/Consolidado_memorias_MTA_Cauca_Cordoba.pdf
CCAFS (2015). Boletín Agroclimático Local: Córdoba, Cauca, Sucre y MCG. Cali, Colombia: CCAFS. Available at https://ccafs.cgiar.org/es/boletin-agroclimatico-regional

The primary 2019 outcome indicator that this case study is contributing to:
FP1 Indicator: # 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
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: INDC-Consolidado.pdf

Project: P114 - Partnerships on Mainstreaming Climate Smart Agriculture(CSA) with National Governments in SEA

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2017
Management liaison	RP SEA - South East Asia Region	**Mgmt. liaison contact**	Tan Yen, Bui <y.bui@irri.org>
Lead organization	IRRI - International Rice Research Institute - Philippines	**Project leader**	Leocadio, Sebastian <l.sebastian@irri.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Myanmar Climate-Smart Agriculture Strategy

Outcome statement: The MCSA Strategy was an outcome of the first national consultation meeting on “CSA Strategies in Myanmar,” facilitated by the CCAFS SEA and the IRRI on September 2013. After a series of meetings and consultations, the MOAI and the YAU drafted the MCSA Strategy. Endorsed by the MOAI minister, the strategy will serve as the country’s roadmap for CSA national action and implementation

Research Outputs: The MCSA Strategy document was put together primarily by MOAI and the Yezin Agricultural University (YAU) as the tangible output of the consultation meeting. Together with other partners, the draft was written and just recently, on February 19, 2016, it was officially launched. The strategy encompasses the development of technical, policy and investment conditions to achieve a sustainable agricultural development for food security and nutrition through climate-resilient and sustainable agriculture. It also provides context and analysis for addressing agriculture in international climate negotiations to better inform climate negotiators and other stakeholders by identifying options and unpacking issues of interest. True to its commitment during the 24th ASEAN Summit in 2014, Myanmar will apply CSA approaches/strategies to contribute to regional food security and environmental protection

Research Partners: Yezin Agricultural University, RIMES, IRRI, IWMI, CIAT

Activities that contributed to the outcome: The initial activity was the national consultation supported by CCAFS and IRRI on 2013. Three months after, Myanmar President U Thein Sein, the MOAI minister U Myint Hlaing, and other members of the president's cabinet came to IRRI to discuss stronger Myanmar-IRRI partnership in rice research. IRRI was also tapped to provide technical assistance in developing and implementing of the Myanmar Rice Sector Development Strategy (MRSDS). Almost simultaneously, these important activities and documents were drafted, and the culminating activity was the official launching on May 2015 and February 2016 of the MRSDS and the MCSA Strategy, respectively

Non-research Partners: Ministry of Agriculture and Irrigation (MOAI), Department of Agricultural Planning, Department of Agriculture, Department of Agricultural Research, Department of Meteorology and Hydrology, ADB- Myanmar

Output Users: The MCSA Strategy serves as a major reference material for Myanmar’s government line agencies especially as the concept, approach, and implementing procedures of CSA is relatively new. Researchers (CG and non-CG), extension workers, farmers’ organizations, and donors are also users of this material

How the output was used: The MCSA strategy serves as a working framework around the concept of CSA which is a crucial first step toward effective planning and implementation of the approach. The MCSA Strategy document is an important reference material for government officials, technical experts, and others stakeholders for planning and implementing CSA interventions

Evidence of the outcome: The MCSA coordinating team, led by MOAI, is tasked to monitor and guide the government in prioritizing investments on CSA. There is now a strong interest to select pilot Climate-Smart Villages in Myanmar. Collaboration with countries which have already started their own CSVs may start in the near future

References:
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwiRxari-aPLAhVIGJQKHRhVAGAQFggqMAI&url=https%3A%2F%2Fcgspace.cgiar.org%2Frest%2Fbitstreams%2F63308%2Fretrieve&usg=AFQjCNHv0bqCUkB1ySw6wAPGbO85Bcu8-g

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Outcome case study #2

Title: Mobilizing Science for Climate Change, Agriculture and Food Security: Engaging the Southeast Asian Media

Outcome statement: To enhance the skills of media practitioners in reporting climate change accurate and technically sound was the impetus in conducting a series of inter-Center media seminar-workshops in Southeast Asia. An outcome of the SEA media-workshops is the unprecedented public-private-civil society partnership that was forged with the goal of replicating this initiative in strategic regions in the Philippines. A handbook on climate change for journalists is also underway

Research Outputs: A total of 199 media practitioners in the Philippines, Vietnam, Lao PDR, and Cambodia were trained on science-based climate change reporting. Even during the activity, the participants already came up with either published news articles or video coverages. In the Philippines, the PAJ and PSciJourn (both are media networks) forged a partnership with the Metro-Pacific Investment Corp, a private conglomerate, which agreed to fund similar activities in at least four provinces across the country. So far, a total of 109 were trained. All of the activity participants are now part of the media list that will help CCAFS amplify its climate change works with various audiences. A handbook on climate change for journalists is being developed by the PAJ, PSciJourn, and the PNEJ which would provide practitioners with clearer and shared understanding of relevant CC concepts. Detailed reports on all the workshops are accessible and available

Research Partners: IRRI, CIAT, CIP-UPWARD, ICRAF, IWMI, WLE, and ILRI

Activities that contributed to the outcome: Preparatory activities entailed face-to-face meetings and coordination with relevant local partners in government line agencies, research institutions and media networks. Four 2-day media workshops were conducted in the Philippines, Vietnam, Cambodia and Lao PDR. The workshops were designed using a mix of modalities like brief lectures on the science of climate change and science reporting, 'marketplace' sessions where more in-depth and lengthier discussions between the scientists/experts and the participants took place, and visits to sites to showcase potential CSA practices/technologies. Initial outputs of the workshops were news articles and video coverages published or featured in various media platforms. Beyond the workshops, the partner media networks in the Philippines submitted and had a proposal approved by the MVP group, a private conglomerate, to replicate the activity across the Philippines. From these discussions started the idea of producing a handbook on climate change for journalists started. Now, the handbook is being drafted

Non-research Partners: Non-research partners: Learning Institute, Lao Journalists Association, Media Alliance, PAJ, Phil . Federation of Rural Broadcasters, Philippine Science Journalists, Inc., Department of Agricultural Extension, Ministry of Agriculture, Forestry and Fisheries, National Agriculture & Fisheries Institute, Ministry of Agriculture & Rural Development, Redraw the Line, Department of Agriculture, Metro-Pacific Investments Corp

Output Users: Media professionals, government information officers, CGIAR Centers, NARS

How the output was used: The regional workshops were replicated in the Philippines, and similar initiative can be worked out in other focus countries. The established network provided the platform for more projects with the media like the CC handbook, media workshops with the PFRB, and media coverage that were earned and not paid

Evidence of the outcome: Counterpart funding and support came from: MPIC USD 35000 and the DA; Redraw the Line, a partner NGO gave USD 4000 (Vietnam); and the Learning Institute, another NGO, gave USD 2000 (Cambodia). In Laos, strong partnership was forged with the Laos Journalists' Association. A CC handbook for journalists is underway

References: Reports on the regional media workshops: Vietnam, Cambodia, Lao PDR, and the Philippines; In-country workshops (Philippines): Albay, Tacloban, Siargao; Related blogs: CCAFS news blogs - After Haiyan: revitalizing agriculture in the Philippines, Sharing climate change science with Philippine provincial media, Laotian media professionals trained in climate change; CCAFS in the news (partner and media sites) - Communicating climate change: bridging science and society;
PAJ forms Eastern Visayas chapter, OpinYon publisher elected prexy; Bicol reporters take up newsroom workshop on climate change; Climate change is 'game changer,' wipes away investments, efforts; Climate change reporting workshop rolls on in Albay, Philippines: Workshop to help journalists with better media coverage of climate change issues

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: <Not defined>

Project: P118 - Working towards a climate smart agricultural sector in LAM

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	30-12-2016
Management liaison	RP LAM - Latin America Region	**Mgmt. liaison contact**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Lead organization	RPL LAM - RPL Latin America	**Project leader**	Loboguerrero, Ana Maria <a.m.loboguerrero@cgiar.org>
Project type	CCAFS COFUNDED	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Scenario guided development of Costa Rica´s Intended Nationally Determined Contribution (INDC)

Outcome statement: In search for a complementary tool to define emission reduction goals (other than model projections), Costa Rica´s INDC team (MINAE) used the CCAFS scenario methodology to start a dialogue amongst national experts, define robust mitigation measures and create a long term national vision on emission reduction. 10 of the 23 mitigation measures of the INDC originated in the scenario workshop. This outcome results from a collaboration between CCAFS LAM and FP4.

Research Outputs: Shifting the paradigm: Narratives of the future guide the development Costa Rica´s INDC.
Resumen de recomendaciones para la Contribución Nacional con base en la creación y un análisis participativo de escenarios socioeconómicos futuros de Costa Rica al 2030.
Recomendaciones para la Contribución Nacional del sector agropecuario guiadas por escenarios socioeconómicos futuros de Costa Rica.
Recomendaciones para la Contribución Nacional del sector forestal guiadas por escenarios socioeconómicos futuros de Costa Rica.
2015 Recomendaciones para la Contribución Nacional del sector transporte guiadas por escenarios socioeconómicos futuros de Costa Rica.
2015 Recomendaciones para la Contribución Nacional del sector residuos guiadas por escenarios socioeconómicos futuros de Costa Rica.
2015 Recomendaciones para la Contribución Nacional del sector energía eléctrica guiadas por escenarios socioeconómicos futuros de Costa Rica.

Research Partners: UCI, Oxford University, IFPRI

Activities that contributed to the outcome: a. Pascal Girot, coordinator of Costa Rica´s INDC team, participated in the 2013 scenario workshop in which regional scenarios for Central America were created. He identified the methodology as useful to create the INDC.
b. UCI motivated the INDC team to create a document with current government proposals to reduce emissions.
c. In a 2 day scenario workshop, 30 national experts reviewed and added suggestions to this document. The new and improved measures were tested for resilience in 4 future scenarios of Costa Rica, downscaled from the CCAFS scenarios for Central America and adjusted to Costa Rica and INDC relevant issues. Experts formulated recommendations of improvement and identified which were the most and least robust measures.
d. For each following sector workshop MINAE used a report with recommendations that resulted from the scenario workshop to start a dialogue.
e. A final summary report of recommendations for the final INDC document.

Non-research Partners: Ministry of Environment (MINAE), UNDP, World Bank, Latin Clima, Programa de Investigación en Desarrollo Urbano Sostenible (PRODUS), Universidad de Costa Rica (UCR), Universidad Nacional de Costa Rica (UNA), Facultad Latinoamericana de Ciencias Sociales (FLACSO), Estudios, Proyectos y Planificación S.A. (EPYPSA), SCS Global Services, German Corporation for International Cooperation (GIZ), Fundacion Para El Desarrollo De La Cordillera Volcanica Central (FUNDECOR), Chrysina S.A, Costa Rica Limpia, Conservation International (CI), and CO2.cr.

Output Users: Pascal Girot (coordinator INDC-team); Minister of Environment Edgar Gutiérrez; 5 consultants of INDC team including World Bank; 373 representatives of public/private sector that used the scenario tested list of robust measures to initiate dialogue in sector workshops; Ministries of Agriculture and Environment, all other Ministries involved in the INDC process.

How the output was used: It was used during the participatory approach in the formulation of the INDC in order to consider various secto inputs, ideas, efforts and contributions.

Evidence of the outcome: The development of Costa Rica´s INDC, including the motives for and main results of the CCAFS scenario methodology, is described in the following document, soon to be published by MINAE´s Climate Change Unit on her website: ¨Estudio de Caso: El Proceso de Elaboración de la Contribución Nacional-INDC de Costa Rica¨.

References: Paniagua, F. 2016. Estudio de Caso: El Proceso de Elaboración de la Contribución Nacional (INDC) de Costa Rica. San José: Ministerio de Ambiente y Energía (MINAE).

Veeger, M., Vervoort, J., Martinez, D., De Leon, F., Paniagua, F. 2015. Shifting the paradigm: Narratives of the future guide the development Costa Rica´s INDC. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). https://cgspace.cgiar.org/handle/10568/69238

Blog: https://ccafs.cgiar.org/es/escenarios-futuros-para-guiar-la-contribuci%C3%B3n-prevista-determinada-de-costa-rica#.Vm21NkorIgt

Video: https://vimeo.com/147130700

Case study: https://ccafs.cgiar.org/es/news/escenarios-futuros-una-herramienta-clave-para-el-desarrollo-de-la-indc-de-costa-rica#.Vs4dHPkrIgt

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Resumen recomendaciones para INDC Costa Rica_taller escenarios CCAFS.pdf

Outcome case study #2

Title: Colombia's agriculture in the Intended Nationally Determined Contribution spotlight

Outcome statement: Colombia was aiming for an equitable and ambitious national commitment ahead of COP21 which, in turn, contribute to their sustainable development. Following this line, Colombia announced its commitment to reduce 20% of GHG emissions by 2030. CCAFS put together national stakeholders and CGIAR research centers IFPRI and CIAT to support the growth emissions baseline and mitigation-scenarios through the assessment of potential emission reduction measures implemented in the AFOLU sector, using IFPRI's land-use, crop an partial equilibrium models.

Research Outputs: International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT) Model (Rosegant et al, 2012)

AgriTech Toolbox: Using agricultural technologies for enhanced productivity and sustainable food security (IFPRI, 2014)

Preparation Process of the Intended Nationally Determined Contribution of Colombia, Advances to April 2015 (MADS, 2015)

Intended Nationally Determined Contribution – iNDC (Government of Colombia, 2015)

Colombian Intended Nationally Determined Contribution – Support document (MADS, 2015)

Research Partners: International Food Policy Research Institute (IFPRI): Modelling the impact of mitigation measures in AFOLU sector using IMPACT.

Universidad de los Andes (UdeA): University selected by the Colombian government to coordinate the research on baseline emissions for the iNDC

Activities that contributed to the outcome: CCAFS engaged with the team responsible of the development of the iNDC and brought together researchers from IFPRI and UdeA, along with institutions of the AFOLU sector in Colombia, among many other stakeholders who brought country information to the modelling tools, so that MADS can test what mitigation measures have the best potential to reduce emissions.

With the information gathered from the process, Colombia was the first country in South America to present its iNDC, and with a goal that bets on sustainable development which took into account all the productive sectors, especially AFOLU, as an integral part of its development model.

Non-research Partners: Institutions part of or engaged with the AFOLU sector, such as the Colombian Corporation for Agricultural Research (Corpoica), the Ministry of Agriculture and Rural Development (MADR), the Rural Agricultural Planning Unit (UPRA), the National Planning Department (DNP), Institute of Hydrology, Meteorology and Environmental Studies of Colombia (IDEAM), Colombian Federation of Cattle (Fedegan) and other gremios in the sector, brought country information to the modelling tools, so that MADS can test what mitigation measures have the best potential to reduce emissions.

Output Users: Ministry of Environment and Sustainable Development (MADS)
Ministry of Agriculture and Rural Development (MADR)
National Planning Department (DNP)

How the output was used: The modelling exercises included different alternatives such as the development of silvopastoral projects in livestock and reforestation, with the own information of the country, to establish a more robust mitigation potential with less uncertainty, so that the MADS will set the ambitious goal unconditional reduction of 20%.

Evidence of the outcome: Colombian Intended Nationally Determined Contribution – Support document http://educacion-ambiental.minambiente.gov.co/images/documentos/cop-21/INDC-Consolidado.pdf
Preparation Process of the Intended Nationally Determined Contribution of Colombia, Advances to April 2015 (MADS, 2015)
https://www.minambiente.gov.co/images/cambioclimatico/pdf/colombia_hacia_la_COP21/2015_12_Mayo_INDC_Proceso.pdf
Press Release: Colombia presents its commitment to reduce by 20% the emissions of Greenhouse Gases http://educacion-ambiental.minambiente.gov.co/images/documentos/boletines/2015-Comunicado_compromiso_COP21_SIDE_EVENT_COLOMBIA.pdf
Reaffirm commitment to reduce gas emissions 20% http://www.elnuevosiglo.com.co/articulos/12-2015-ratifican-compromiso-de-reducir-20-emisiones-de-gases.html

References: Rosegrant, M., The IMPACT Development Team. (2012). International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT) Model Description. Washington DC: IFPRI. Available at http://www.ifpri.org/publication/international-model-policy-analysis-agricultural-commodities-and-trade-impact
IFPRI. (2014) AgriTech Toolbox: Using agricultural technologies for enhanced productivity and sustainable food security. Washington DC: IFPRI. Available at http://www.ifpri.org/publication/agritech-toolbox-using-agricultural-technologies-enhanced-productivity-and-sustainable
Ministerio de Ambiente y Desarrollo Sostenible [MADS]. (2015). Proceso de Preparación de la "Contribución Determinada Nacionalmente" de Colombia – Avances a Abril de 2015. Bogotá DC: MADS. Available at https://www.minambiente.gov.co/images/cambioclimatico/pdf/colombia_hacia_la_COP21/2015_12_Mayo_INDC_Proceso.pdf
Ministerio de Ambiente y Desarrollo Sostenible [MADS]. (2015). Contribución Prevista y Nacionalmente Determinada (iNDC) de Colombia – Documento de Soporte. Bogotá DC: MADS. Available at http://educacion-ambiental.minambiente.gov.co/images/documentos/cop-21/INDC-Consolidado.pdf
Gobierno de Colombia. (2015). Intended Nationally Determined Contribution iNDC. Bogotá DC: Gobierno de Colombia. Available at https://www.minambiente.gov.co/images/cambioclimatico/pdf/colombia_hacia_la_COP21/iNDC_ingles.pdf

The primary 2019 outcome indicator that this case study is contributing to:
FP4 Indicator: # of equitable national/subnational food system policies enacted that take into consideration climate smart practices and strategies
FP3 Indicator: # 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.

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: Colombia iNDC Unofficial translation Eng.pdf

Project: P119 - Scaling up Climate-Smart Agriculture (CSA) Practices and Technologies Across South Asia

Start date (dd-MM-yyyy)	01-01-2015	**End date (dd-MM-yyyy)**	31-12-2016
Management liaison	RP SAs - South Asia Region	**Mgmt. liaison contact**	Aggarwal, Pramod <P.K.Aggarwal@cgiar.org>
Lead organization	IWMI - International Water Management Institute - Sri Lanka	**Project leader**	Shirsath, Paresh B <p.bhaskar@cgiar.org>
Project type	CCAFS CORE	**Detailed project workplan**	<Not defined>

Outcome case study #1

Title: Scientifically-designed index insurance protects a million Maharashtra farmers from increasing extreme rainfall events

Outcome statement: CCAFS analysed that current schemes do not pay sufficiently because of poor triggers. Using several scientific techniques to examine crop-weather relationships CCAFS developed new region and crop specific rainfall triggers which enhance farmers' satisfaction several times. Maharashtra state of India with a large population of resource poor rainfed farmers has adopted these new products and several insurance companies notably AIC of India have applied them in 2015 to provide rainfall risk cover to crops of almost one million farmers.

Research Outputs: Report, discussion paper (attached)
Journal article (in pipeline)
Other: blog

Research Partners: Agricultural Insurance Company of India; Department of Agriculture, Government of Maharashtra and Kolli N Rao, IRICS/Aon Benfield

Activities that contributed to the outcome: Our pioneering research on designing crop weather triggers using multiple crop and statistical models and optimisation to improve satisfaction of stakeholders especially farmers
Continuous engagement with industry and the government in development of the methodology and its evaluation
Timely delivery of results.

Non-research Partners: Implementing partners are Agricultural Insurance Company of India, other private insurance companies, and Department of Agriculture, Government of Maharashtra.

Output Users: Department of Agriculture, Government of Maharashtra; Agricultural Insurance Company of India and other insurance industries

How the output was used: Crop insurance against weather derivatives

Evidence of the outcome: CCAFS designed rainfall triggers for rice, pearl millet, soybean and cotton in Maharashtra state, India. The Government of Maharashtra has used improved insurance products in the rainy season of 2015 and will protect more than a million farmers from the vagaries of the weather in one season alone (evidence attached).

References: i. Better designed weather-based insurance holds promise for Maharashtra farmers: https://ccafs.cgiar.org/research highlight/better-designed-weather-based-insurance-holds-promise-maharashtra-farmers#.VbcR9_mqpBc
ii. CCAFS Report on WBCIS (attached)
iii. Evidence from Government of Maharashtra (attached)

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: CCAFS-Report-WBCIS.PDF

Outcome case study #2

Title: Real-time crop yield monitoring in Nepal for food security planning and climatic risk management

Outcome statement: CCAFS in partnership with World Food Programme (WFP), and the Ministry of Agricultural Development (MoAD) of Nepal successfully demonstrated the use of CCAFS tools and approach for real-time estimates of food production much before official estimates based on field measurements are made available. The outputs of this approach for last two consecutive seasons form the basis of Nepal's Food Security Monitoring System (NeKSAP).

Research Outputs: Reports
Journal article (in pipeline)
Other: blog

Research Partners: World Food Programme (WFP), Nepal; FP2 (CRAFT tool) and FP4 (DSSAT models)

Activities that contributed to the outcome: Development of databases of soils, weather, and management practices of rice and wheat
Hind-cast evaluation of rice and wheat production for last 20 years.
Involvement of stakeholders- World Food program and Nepal's Ministry of Agriculture in the process

Non-research Partners: Ministry of Agricultural Development (MoAD), Nepal

Output Users: Nepal Food Security Monitoring System (NeKSAP)

How the output was used: Outputs were used in Nepal Food Security bulletins which are key to food stock planning and management.

Evidence of the outcome: Food Security Bulletins of the Government of Nepal's Food Security Monitoring System (NeKSAP) (evidence attached).

References: Nepal Food Security Bulletins http://neksap.org.np/food-security-bulletins
Stakeholders learn new features of yield forecasting toolkit https://ccafs.cgiar.org/blog/stakeholders-learn-new-features-yield-forecasting-toolkit#.VtgMMjZunVh

The primary 2019 outcome indicator that this case study is contributing to:
FP2 Indicator: 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
FP2 Indicator: Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

Explanation of the link between your outcome story and the CCAFS indicators:

Year: 2015

Annexes uploaded: CropOutlookNepal.pdf