1. Activity Reporting.

Activity 548-2014

Policy recommendations on livelihood-based gender-equitable risk management strategies aiming at reducing vulnerability to climate change in rural small-scale maize households in East Africa.

Status	Cancelled	Milestone	1.1.1 2015 (1)
Start date	2013 Jan	End date	2015 Jun

Description: This works aims to produce policy recommendations on livelihood-based gender-equitable risk management strategies aiming at reducing vulnerability to climate change in rural smale-scale maize households. Bioeconomic modelling will be used to select promising interventions that can be used by men and women farmers to enhance their livelihoods in the face of risks brought by climate change. This will inform the establishment of participatory demonstration field trials on climate risk management among vulnerable farming systems in East Africa.

Status: Cancelled. Partially completed. Remaining deliverables were initially planned for 2015 which are discontinued and replaced by CCAFS Phase II.

Gender Component: This activity will consider socially-differentiated groups, especially female-headed households.

Objectives:

1. Analysis of regional (Kenya) differential role, tradeoffs and impact of risk management strategies in maize-based systems on women and men using farm household bioeconomic models continued.

Deliverables:

Description	Type	Year	Status	Justification
Publication on gender-differentiated risk preference and its implication for risk management strategies (i.e. short-term coping and long-term farm improvement strategies) of poor maize farm households Kenya (Kenya CIMMYT-CCAFS data).	Peer-reviewed journal articles	2014	On going	Accepted for plenary presentation at Climate Smart Agriculture Global Science Conference, Montpellier, 16-18 March 2015. Revision is on-going for Journal of Economic Psychology submission expected in March 2015.
Publication on maize farm household and climate risk exposure typology for climate risk evaluation (Kenya CIMMYT-CCAFS survey data)	Peer-reviewed journal articles	2014	On going	Accepted for poster presentation at Climate Smart Agriculture Global Science Conference, Montpellier, 16-18 March 2015. Revision is on-going for Agricultural Systems submission expected in March 2015.
Stakeholder and scientist workshop with selected typical farm households to discuss and validate the model findings (possible involvement with SIMLESA innovation platform and CIMMYT scientists)	Workshop	2015	Incomplete	
Bioeconomic model to evaluate and recommend gender-sensitive efficient climate risk management strategies at enhancing food security and climate risk resilience under increased climate variability for typical maize farm households in Kenya (Collaboration with UC Davis).	Models (i.e. Agronomic Trials)	2014	On going	The activity was initially planned to complete in 2015. Remaining deliverables are on-going on a no-cost extension arrangement with the collaborator (UC Davis) until June 2015.
Policy briefs on targeting and supporting gender-sensitive efficient climate risk management strategies for typical maize farm households in Kenya.	Articles for media or news (radio, TV, newspapers, newsletters ,etc.)	2015	Incomplete	

Description	Type	Year	Status	Justification
Additional in-depth data collection for bioeconomic model key parameters of selected typical farm households in Kenya (sub-sample of Kenya-CCAFS survey)	Data	2014	Complete	

Partners:

1- University of California, Davis (UC Davis):
Stephen Boucher <boucher@primal.ucdavis.edu>

2- Kenya Agricultural Research Institute (KARI):
Charles Bett <cbet_chembett@yahoo.co.uk>

Location(s):

Countries: Kenya,
Benchmark Site: Makueni (Wote),

Activity 950-2014

Exploring linkages between adaptation and mitigation by analyzing synergies and trade-offs between them in the scientific literature, local initiatives and global funding

Status	On going	Milestone	1.3.1 2014 (2)
Start date	2014 Jan	End date	2014 Dec

Description: Systematic literature review on adaptation-mitigation synergies; Analysis of 200+ climate change projects in agriculture and forests worldwide with regard to their consideration of both adaptation and mitigation; Analysis of major climate change funding and the view of fund representatives on adaptation-mitigation synergies.

Status: On going. Analyses completed. Journal papers written (two under review). Database completed (papers and projects). Events organized (side event on adaptation-mitigation synergies at COP19 in Warsaw, december 2013), conference on climate-smart territories (Costa Rica, october 2013). Meeting with policymakers (Peru, Bolivia)

Gender Component: Gender is considered with a combination of supplementary data from an adaptation project and will be published in a second article and in the policy brief

Objectives:

1. Reviewing literature on adaptation-mitigation synergies
2. Analyzing global portfolios of climate change projects in agriculture and forests with regard to their consideration of both adaptation and mitigation
3. Analyzing major climate change funding and the views of fund representatives on adaptation-mitigation synergies

Deliverables:

Description	Type	Year	Status	Justification
Publication on systemic literature review about adaptation-mitigation synergies	Peer-reviewed journal articles	2014	On going	Manuscript completed but not submitted in 2014 for lack of time
Publication on adaptation-mitigation synergies in global project portfolios	Peer-reviewed journal articles	2014	On going	Manuscript under peer review
Publication on adaptation-mitigation synergies in global climate change funding	Peer-reviewed journal articles	2014	On going	Manuscript under peer review

Partners:

1- Acclimatise Climate Change Adaptation Consultants (Acclimatise):
Virginie Fayolle <v.fayolle@acclimatise.uk.com>

Location(s):

Global

Activity 951-2014

Analyzing the impact of different governance systems and models on carbon stocks, C sequestration at different land uses in decision making and policies

Status	On going	Milestone	1.3.1 2014 (2)
Start date	2014 Jan	End date	2014 Dec

Description: Impact analyses of different governance systems and models on the carbon stock and sequestration in different land uses; the overall objective is to provide a comparative analysis of carbon stocks in different landscapes and different management practices to be integrated in evidence-based decision-making of land use plans and policies at the national level.

Status: On going. The data collection and analysis for the most common land-uses in Burkina Faso is completed. A manuscript for one article is submitted and a draft for a policy brief and a second article are in preparation

Gender Component: We integrate the role of services provided in each land use for women.

Objectives:

1. 1. compare the carbon stock in different land uses including agroforestry parklands, fallows and reforested areas
   2. compare carbon stock under contrasted governance regimes (strictly protected areas, community forestry, private planted forests)
   3. analyze the impact of different governance systems on carbon stock and sequestration
   4. provide scientific evidences on carbon stock in different landscapes and different management practices in order to allow evidence-based decision-making land use plans and policies

Deliverables:

Description	Type	Year	Status	Justification
Impact analyses of different governance systems and models on the carbon stock and C sequestration, productivity and livelihoods in different land uses;	Peer-reviewed journal articles	2014	On going	The paper was submitted on time. The review process took a long time. Will be resubmitted in March.
Comparative analysis of carbon stocks, are used in evidence-based decision-making of land use plans and policies at the national level.	Articles for media or news (radio, TV, newspapers, newsletters ,etc.)	2014	On going	

Partners:

1- Institut de l'Environnement et de Recherches Agricoles (INERA):
Dr. Louis Savadogo <sawadogo_ls@hotmail.com>

Location(s):

Countries: Burkina Faso,

Activity 952-2014

Tools for tradeoffs analysis of mitigation options at landscape level

Status	On going	Milestone	3.1.1 2014
Start date	2014 Jan	End date	2014 Dec

Description: This activity develops and tests tools to assess productivity, economics and social acceptability of mitigation options at field, farm and landscape level. The approach is participatory, inclusive and quantitative in nature. It seeks to include disadvantaged land users to understand their opportunities and role on mitigation on a fragmented landscape.

Status: On going. Data collection was finalized in 2014. The approach was to be tested with selected mitigation practices in the CCAFS site of Nyando. The surveys included work on agroforestry, sugarcane and vegetable production. There is another piece of work conducted on livestock led by ILRI. We present here findings on the agroforestry work, which was finalized. We expect that the sugarcane data and the vegetables data will be analysed in the coming months by Maseno University students under supervision of Dr Di Giusti. The other pending activity is the discussion with farmers on the implication of the results, since the analyses were only finalized in December 2014 by our partner.

Gender Component: The method includes farmers from all sectors of the community and seeks to have a good representation of the poorest, including the elderly and female headed household when capture information on decision making. Our findings show the poor influence of women in the decision making process to decide which trees to plant, and when to harvest in system where trees seem to contribute to income.

Objectives:

1. To develop and test tools that assist researchers and practitioners to assess tradeoffs of mitigation options at field, farm and landscape levels

Deliverables:

Description	Type	Year	Status	Justification
Paper submitted on costs of mitigation at farm and landscape level using IMPACTlite, and the SAMPLES datasets	Peer-reviewed journal articles	2014	On going	We have produced a report formatted to be submitted in a few weeks to a peer-reviewed journal
Report on feedback of results of the analysis presented and discussed with the county authorities, NGOs and farming community from the Nyando CCAFS sites	Workshop	2014	On going	This activity was not completed because the data analyses were completed in December 2014. Meeting with farmers will take place in the next few weeks.
Methods and datasets feed into the CG-level protocol to quantify emissions and costs of mitigation from smallholder systems (SAMPLES)	Platforms - Data Portals for disseminati on	2014	On going	

Partners:

1- Maseno University:

Giovanna DeGiusti <giovanna.degiusti@gmail.com>

Location(s):

Countries: Kenya,

Benchmark Site: Nyando (Katuk Odeyo),

Activity 953-2014

Methods for integrating community-based monitoring results into regional and national MRV systems

Status	Complete	Milestone	3.2.2 2014
Start date	2014 Jan	End date	2014 Dec

Description: The work takes place in Indonesia in 3 provinces: Papua (District of Mamberamo Raya), West Kalimantan (District of Kapuas Hulu), and Central Java (District of Wonosobo). The work evaluates willingness, availability, capacity of local communities to participate in MRV. It compares data flows in 2 existing reporting systems in Indonesia: how data is collected from the local level, what involvement of local people, what lessons learned for participatory reporting. It seeks unexpensive and accurate ways to verify participatory measurements. In this study (GIS/Remote Sensing), the focus is on the characterization of degradation, compared to local people's assessment.

Status: Complete. The activity ended on December 31, 2014. No extension has been planned.

Gender Component: Some of the focus group discussions were done according to gender in the 7 villages of the project

Objectives:

1. Understand the conditions for local people's participation to Measurement, Reporting and Verification of carbon
2. Understand deforestation and forest degradation in the 3 sites of the project, using remote sensing
3. Understand and compare forestry and health systems regarding information flow
4. Integrate these 3 approaches (social study, remote sensing, and governance) to propose a Participatory MRV tool that uses the lesson learned from other experiences

Deliverables:

Description	Type	Year	Status	Justification
Comprehensive guidelines to deal with multiple drivers of deforestation that operate at different temporal and spatial scales, i.e. participatory mapping on MRV.	Non-peer reviewed articles	2014	Complete	
Article on local people's participation to MRV	Peer-reviewed journal articles	2014	Complete	
Database with all the project's data	Data	2014	Complete	
Poster about PMRV and Carbon	Articles for media or news (radio, TV, newspapers, newsletters ,etc.)	2014	Complete	
Working paper	Non-peer reviewed articles	2014	Complete	
Project website http://www.cifor.org/pmrv/	Social media outputs (including web sites, blogs, wikis, linkedin group, facebook, yammer, etc.)	2014	Complete	

Partners:

1- Gadjah Mada University (UGM):

Dr. Satyawan Pudyatmoko (Dean, Faculty of Forestry) <satyawan_pudy@yahoo.com>

Location(s):

Countries: Indonesia,

Activity 954-2014

On-farm and landscape level trials on strategies to increase system productivity, soil quality and carbon sequestration in East Africa

Status	On going	Milestone	3.3.1 2014
Start date	2013 Jan	End date	2015 Dec

Description: We gather landscape level data to quantify EFs and changes in C stocks in forest transitions. There is smallholder agriculture and commercial agriculture at all sites targeted. The choice of a number of contrasting landscapes offers the opportunity for local and regional comparisons, supported with modeling studies. This work is largely funded with bilateral funds, and has strong synergies with FTA to demonstrate the use of a landcsape aproach for MRVs.

Status: On going. We have completed data collection on GHG emission potentials for three systems: the Mau forest, and the CCAFS sites of Nyando and Rakai in Uganda. We did not have the funds to conduct the scoping study in the Usambaras (Lushoto). One paper was submitted about the monitoring of fluxes in Nyando, and we have drafted one manuscript for Rakai and one for the Mau forest landscape. The work has been conducted in collaboration with ILRI, so this is also reported by them.

Gender Component: Not defined

Objectives:

1. To quantify EFs and changes in C stocks in forest transitions
2. To develop effective methods to monitor GHG emissions and C dynamics due to landuse change

Deliverables:

Description	Type	Year	Status	Justification
Papers submitted on potential for emissions reduction due to avoided deforestation, management of forest and of trees on farm (i) Mau forest complex in Kenya, (ii) Nyando (iii) and on a perennial croping system in Rakai in Uganda. Scoping report for the Usambaras.	Peer-reviewed journal articles	2014	On going	Paper was submitted at the beginning of 2015 to Global Change Biology.
Methods and datasets (with emission factors) feed into the CG-level protocol to quantify emissions from smallholder systems and to identify mitigation options (SAMPLES)	Data	2014	Complete	

Partners:

1- International Livestock Research Institute (ILRI):
Klaus Butterbach-Bahl <k.butterbach-bahl@cgiar.org>

2- Maseno University:
David Stern <volloholic@hotmail.com>

3- World Agroforestry Centre (ICRAF):
Todd Rosenstock <t.rosenstock@cgiar.org>

Location(s):

Countries: Kenya, Tanzania, Uganda,
Benchmark Site: Nyando (Katuk Odeyo), Kagera Basin (Rakai), Usambara (Lushoto),

Activity 955-2014

Assessment of carbon stocks and land quality improvement from farmer assisted regeneration trials

Status	On going	Milestone	3.3.1 2014
Start date	2013 Jan	End date	2014 Dec

Description: This project aims at assessing the mitigation potential of restoration of degraded lands: stock C in the soil and put land back into production. This is well aligned with sustainable intensification of agriculture and the land sparing hypothesis

Status: On going. After a number of false starts with the partner, we are now on track and will be able to wrap this up in the coming months. The data set is now complete and the data are being analyzed.

Gender Component: Not defined

Objectives:

1. To collect data on GHGs emissions from high C ecosystems (marsh, swamp lands and wetlands) to generate EFs
2. To collect data on GHGs emissions from degraded lands and crop lands with trees to generate EFs
3. To assist regeneration of natural vegetation to generate EFs

Deliverables:

Description	Type	Year	Status	Justification
Dataset with measurements of the GHG emissions from degraded marsh, swamp lands, wet lands in India	Data	2014	On going	As noted, partner problems have led to delays; our postdoc left without completing the work. This deliverable is now on track for delivery in 2015 with a new postdoc. However, during a technical session organized at FSI in Dehra Dun, the results of the work were very well received.
Dataset with measurements of the GHG emissions from degraded lands and crop lands with trees in Kenya and India	Data	2014	On going	Data collection continues in Kenya; the PhD student is making slow, but steady progress. Data collection is complete in India and the write-up is ongoing. The deliverable is delayed because of problems with the partner, but it is now on track.
Dataset on potential for C sequestration and impacts on GHG emission reductions due to management of tree cover in degraded drylands (Wote, Makueni district in Kenya)	Data	2014	On going	

Partners:

1- World Agroforestry Centre (ICRAF):
Pal Singh <v.p.singh@cgiar.org>

2- International Livestock Research Institute (ILRI):
Klaus Butterbach-Bahl <k.butterbach-bahl@cgiar.org>

3- Foundation for Ecological Security (FES):
Jagdeesh Rao <jagdeesh@fes.org.in>

Location(s):

Countries: India, Kenya,
Benchmark Site: Makueni (Wote),

Activity 956-2014

Studies on management effects on GHG emissions, especially nitrous oxide, in oil palm plantations in Indonesia and Cameroon

Status	On going	Milestone	3.3.1 2014
Start date	2013 Jan	End date	2014 Dec

Description: The work on Indonesian peatlands is aimed at assessing the impacts of conversion of peat swamp forests to oil palm on the atmosphere. We are quantifying the changes in soil to atmosphere fluxes of three greenhouse gases (CO2, N2O and CH4) from this conversion. We are also looking at another gas, NO, which is an ozone precursor. As part of this work we are interested in both the land use change effects and the effects of management on the atmosphere, so we have some work specifically on fertilization and how fertilization stimulates peat decomposition and CO2 emission as well as N2O emissions.

Status: On going. Field work in Jambi has been completed and papers are wending their way through the publication pipeline. The first paper was published in January 2014. At least 3 others are likely to appear in 2015, much depends on the rapidity of the review process. Data collection is still ongoing in Borneo and will finish up later this year. In Cameroon, data collection has been ongoing since the middle of last year and will continue.

Gender Component: Not defined

Objectives:

1. To estimate GHG emissions from oil plantations and natural forest to derive EFs that can inform national inventories

Deliverables:

Description	Type	Year	Status	Justification
Three doctoral theses submitted	Peer-reviewed journal articles	2014	Complete	
Four papers on effects of land-use change on C stocks and GHG emissions from peat in oil palm systems in Indonesia	Peer-reviewed journal articles	2014	Complete	
Lab to measure greenhouse gases set and data collection started from oil palm plantations in Cameroon	Capacity	2014	On going	
	Data	2014	Incomplete	
Four papers on effects of land-use change on C stocks and GHG emissions from peat in oil palm systems in Indonesia	Peer-reviewed journal articles	2014	Complete	
Four papers on effects of land-use change on C stocks and GHG emissions from peat in oil palm systems in Indonesia	Peer-reviewed journal articles	2014	Complete	
Four papers on effects of land-use change on C stocks and GHG emissions from peat in oil palm systems in Indonesia	Peer-reviewed journal articles	2014	Complete	
	Data	2014	Incomplete	
Four papers on effects of land-use change on C stocks and GHG emissions from peat in oil palm systems in Indonesia	Peer-reviewed journal articles	2014	Complete	
Four papers on effects of land-use change on C stocks and GHG emissions from peat in oil palm systems in Indonesia	Peer-reviewed journal articles	2014	Complete	
Unplanned paper for the Alliance of Small island States	Non-peer reviewed articles	2014	Complete	

Description	Type	Year	Status	Justification
Unplanned paper for the Alliance of Small island States	Non-peer reviewed articles	2014	Complete	
participation in various workshops with the scientific community and policy makers	Presentations	2014	Complete	

Partners:

1- University of Aberdeen:
Jo Smith <jo.smith@abdn.ac.uk>

2- Indonesian Soil Research Institute (ISRI):
Fahmuddin Agus <fahmuddin_agus@yahoo.com>

3- World Agroforestry Centre (ICRAF):
Meine van Noordwijk <m.vannoordwij@cgiar.org>

4- Institute of Meteorology and Climate Research, Atmospheric Environmental Research (IMK-IFU):
Michael Dannemann <michael.dannenmann@kit.edu>

Location(s):

Countries: Cameroon, Indonesia,

Activity 957-2014

Simple tools to assess mitigation and adaptation potential at the national level

Status	Complete	Milestone	4.2.1 2014 (3)
Start date	2014 Jan	End date	2015 Dec

Description: This activity will make use of spatial tools and models to assist the priority setting during the implementation of the National Climate Change action plan of Kenya. Our team in partnership with Kenyan stakeholders and the CCAFS EA program will use the best scientific methods to assist a quantitative analysis of what the different options of selection of targets will mean for productivity, food security, economics and mitigation potential

Status: Complete. The tool has been developed and tested with Kenyan stakeholders representing the government of Kenya, the academia, NGOs and the private sector. The Climate change secretariat has shown interest to use the tool in a real case for setting priorities. This will be followed up during 2015 as part of the CCAFS East Africa led project National and regional partnerships to support integration of climate change in agriculture and food systems

Gender Component: The tool is designed to quantify impact on disadvantaged groups by combining choices of landbase practices in the prioritization of adaptation and mitigation options

Objectives:

1. To support national level stakeholders to set priorities for CSA providing scientific methods, and monitoring during implementation of practices.

Deliverables:

Description	Type	Year	Status	Justification
Tools developed to assist priority setting in the implementation of NAPs and NAMAs	Platforms - Data Portals for dissemination	2014	Complete	
Tools are tested and used with partners from the Government of Kenya, NGOs, CSOs, and the private sector in the implementation of the Kenyan National Climate Change action plan	Presentations	2014	Complete	
Partners are trained on the used of the methods	Capacity	2014	Complete	
The manuscript (uploaded as a report here) presents the principles used to develop the targeting tool, the process followed to include stakeholders opinion, and the findings that show the usefulness of the tool.	Peer-reviewed journal articles	2014	On going	The manuscript is about to be submitted to the journal

Partners:

1- International Livestock Research Institute (ILRI):
Klaus Butterbach-Bahl <k.butterbach-bahl@cgiar.org>

2- International Livestock Research Institute (ILRI):
James Kinyangi <j.kinyangi@cgiar.org>

Location(s):

Countries: Kenya,

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

Output: 1.1.1

Summary: NA

Output: 1.3.1

Summary: Starting by providing evidences on the carbon stock of different land uses under different governance regime, this study will help to develop institutional arrangements which take in account the trade offs between adaptation needs and and mitigation measures. It will also enable to avoid maladaptive mitigation actions which can affect negatively the adaptive capacity of farmers and the resilience of farming systems.

Output: 3.1.1

Summary: The data and tools generated by the SAMPLES team will be useful for the GHG inventories offices to prepare their communications. We are in conversations with the Kenyan inventory office to assist them improve their quantifications of emissions from the agriculture and forest sector.

The global hotspot analyses conducted in collaboration with Wageningen University, ILRI and ICRAF sparked interest at the Global Lanscape Forum. We expect that USAID will be using a re-formatted product of the global hotspots to assist their priority setting. Report will be sent to CCAFS by email.

Output: 3.2.2

Summary: The tool developed for targeting CSA will be useful to evaluate development pathways. We will use it with the government of Kenya and Uganda in the near future. We will put effort to build capacity in the government to be able to use the tool by themselves.

Data generated by PMRV will be useful to determine whether local participation in MRV is feasible and sustainable and under what conditions. Efforts will be made to build government and NGO capacity to use the tool prior to any participatory MRV activity, especailly in Ethiopia and Indonesia.

Output: 3.3.1

Summary: The social acceptability analysis conducted as part of SAMPLES will be expanded to include other mitigation options

Output: 4.2.1

Summary: The tool developed for targeting CSA will be useful as well to assess adaptation to climate change impacts

3. Communications.

Media Campaigns:

NA

Blogs:

CCAFS East Africa wrote a blog about the CSA targeting tool we developed. See http://ccafs.cgiar.org/blog/exploring-targeting-options-climate-smart-agricultural-investments-kenya#.VOl3zvmUcbg

WUR and CIFOR wrote a blog about the event organised at the Global landscape forum. See http://www.landscapes.org/can-climate-smart-agriculture-help-realize-redd/

CIFOR wrote a blog on the PMRV preliminary results: http://blog.cifor.org/25799/redd-participatory-mrv-study-indonesia#.VOqVGsZMnBE

CIFOR wrote a blog on a poster developed by the PMRV team to explain what carbon is: http://blog.cifor.org/25533/carbon-101-faced-with-teaching-a-complex-topic-scientists-get-creative#.VOqVHcZMnBE

CIFOR participated from the New York climate summit: http://blog.cifor.org/24311/on-forests-role-in-climate-new-york-times-op-ed-gets-it-wrong#.VOcWEfmUc40

http://blog.cifor.org/21687/project-seeks-to-unlock-the-mysteries-of-perus-peatlands?utm_source=CIFOR+Blog&utm_medium=Left+bar&utm_campaign=wetland#.VOw81vmUc40

http://blog.cifor.org/25936/small-farmers-in-peru-build-climate-resilience-with-innovation-living-lab#.VOxBpfmUc40

http://blog.cifor.org/9829/landscape-approaches-can-end-the-debate-that-pits-agriculture-against-forests-say-experts#.VOxCTPmUc40

http://blog.cifor.org/25785/dragons-urge-youth-to-take-the-reins-of-power-and-solve-forestry-and-agriculture-problems#.VOxC1fmUc40

Websites:

CIFOR wrote a website on PMRV project describing the approach, the methods, sites, and preliminary results: http://www1.cifor.org/pmrv/home.html

http://blog.cifor.org/category-en/climate-change-2/#.VOcXIfmUc40

http://blog.cifor.org/wetlands/?utm_source=CIFOR+Blog&utm_campaign=wetland&utm_medium=Detail+page+button#.VOw8RfmUc40
http://www.forestclimatechange.org/

Social Media Campaigns:
NA

Newsletters:
NA

Events:
1. Presentation of results at the Global Comparative Study (GCS) CIFOR workshop on REDD+ and the role of forest in climate change adaptation and mitigation in April 2014 in Ouagadougou

2. Leading IUCN capacity building workshop on climate change and REDD+ intended for actors from civil society in West Africa: training field work on evaluation of aboveground biomass and carbon stock for NGO's and practitioners.

3. CIFOR participated of an event organised by Wageningen University and the Norwegian University of Life Sciences at the Global Landscape Forum in Lima (December 2014) where we discussed the complementary of REDD+ and CSA. See http://www.landscapes.org/glf-2014/agenda-item/day-2-dec-7/six-parallel-multi-stakeholder-discussion-forums-debates/will-climate-smart-agriculture-help-realize-redd/. We presented in that event research conducted under CCAFS on the Global hotspots for GHG emissions, and a method to analyse REDD and CSA interventions. Two publications are being prepared at the moment on these two topics.

CIFOR participated of the New York climate summit: http://www.cifor.org/colloquium-on-forests-and-climate/

http://www.landscapes.org/climate-change/

http://www.cifor.org/forestsasia/

Videos and other Multimedia:
PMRV project published online a few video describing its activities: http://www1.cifor.org/pmrv/multimedia/video.html
https://www.youtube.com/watch?v=Q7fV25WDHP4&list=PLZ1FEAFDHOWcnCwld2Qjio_vqHIExpcwG&index=7

https://www.youtube.com/watch?v=hZ4pe3T1eI0&list=PLZ1FEAFDHOWcnCwld2Qjio_vqHIExpcwG&index=12

https://www.youtube.com/watch?v=FIgjeTi_gPo&index=15&list=PLZ1FEAFDHOWcnCwld2Qjio_vqHIExpcwG

https://www.youtube.com/watch?v=j6_U0eIjLIo&list=PLZ1FEAFDHOWcnCwld2Qjio_vqHIExpcwG&index=3

Other Communications and Outreach:

An interview of the PMRV project coordinator was published on YouTube: https://www.youtube.com/watch?v=HCNFodbMVEQ

4. Case studies.

Case Study #1

Title: Participatory measurement, reporting and verification (PMRV): addressing the scales

Author: Manuel Boissière

Type: Participatory action research ;

Project Description:

In the global REDD+ debate, Measurement, Reporting and Verification (MRV) systems are designed to be applied and relevant at the national level; which can be a challenge for large countries because of the diversity of subnational situations. Building knowledge for an efficient and equitable MRV system across scales (from local to national) becomes crucial for REDD+ successful implementation. Local participatory MRV systems embedded into a national database is an innovative approach but research is needed to explore their potential while noting the necessity to explore how MRV can include issues of local interest, such as adaptation, in addition to carbon sequestration.

The 'Participatory MRV (PMRV): addressing the scales' project aims at conducting a feasibility study on participatory MRV to be relevant to REDD+ as well as to national databases [to be managed by national governments] while including local interests, environmental management and addressing adaptation goals.

This project conducted a feasibility study in 7 villages located in 3 provinces of Indonesia (Papua, West Kalimantan, and Central Java) since May 2013 and ended in December 2014. It worked also at the national level on the governance of data flow in the forestry and health sectors from local to national levels.

Introduction / objectives:

What does it take for PMRV to be feasible and sustainable? It is not enough to look at the cost-efficiency (e.g. measurements by local people are cheaper and of similar quality in comparison to those by experts), we need to understand why would local people participate and for what activity. We explored participation not in measurements, reporting and verification. We provide a set of perspectives on different aspects: land tenure, local perception of environmental drivers of change, potential role of participatory mapping in validation of carbon/non-carbon assessment, learning from

other experiences in reporting information from local to national levels.

Project Results:

Activities were structured around 3 main focuses:
- Social science study of the conditions under which participation of local communities in MRV is feasible and sustainable
- Governance study to analyze and compare the way information flows across levels (from local to national) in the forestry and health sectors.
- GIS and remote sensing (RSGIS) study to provide data on land cover and land-use changes for the three provinces. The RSGIS team conducted fieldwork in West Kalimantan to ground check data from satellite images.

A team of 12 researchers in 2014 (20 in 2013), from different backgrounds and nationalities, was built to achieve the project objectives.
In 2013 two series of fieldwork campaigns at each site helped us to collect an important amount of data. In 2014 we analyzed the data, developed a database to enter the data, and started to produce journal articles, policy brief, working papers and a website (see the list below).

Data collected during the project are still being analyzed. Some have been published (see the list of outputs) and some are in preparation for a collection of PLoS ONE in 2015. A poster explaining the meaning and importance of carbon was popular after we published a version in English and Indonesian (a Spanish, Kiswahili and Amharic version is under development in 2015) on our project website.

Results, even preliminary, raised a lot of interest after we launched the project website (see the next section) and several blog stories. There is a potential to use this kind of research in Africa, especially in Ethiopia, which has just developed its national MRV roadmap. We presented our preliminary results to an Ethiopian delegation in January 2015, which included the ministry of forestry, the governor of one of the provinces, and the head of the REDD Secretariat.

Partners:

Center for International Forestry Research (CIFOR)
University of Gadjah Mada (UGM)
Centre de coopération Internationale en Recherche Agronomique pour le Développement (CIRAD)

Links / sources for further information:

- General description of the project/module: http://www.cifor.org/pmrv/home.html
- All the project methods published online in English and PDF:
http://www.cifor.org/pmrv/activities/social-science/methods.html
http://www.cifor.org/pmrv/activities/governance/methods.html
http://www.cifor.org/pmrv/activities/rsgis/methods.html
- All our current publications are available online. This include a Policy Brief in English and French, a

working paper on the literature review in English, and an impact factor journal article.
http://www.cifor.org/pmrv/publications.html
- A series of 7 short videos showing the fieldwork condition and present some of the villages.
http://www.cifor.org/pmrv/multimedia/video.html
- A sample of 7 maps (out of a total of 25) showing land use and land cover according to different perspectives: local people (participatory mapping) and remote sensing.
http://www.cifor.org/pmrv/multimedia/maps.html
- A series of 9 PowerPoint presentations presented at international conferences (Forest Change 2014, Freising, Germany; Resilience and Devleopment: mobilizing for transformation, Montpellier, France; International Conference on Forests, Soil and Rural Livelihoods in a Changing Climate, Kathmandu, Nepal) and workshops (at Gadjah Mada University, Yogyakarta, Indonesia).
http://www.cifor.org/pmrv/multimedia/presentations.html
http://www.cifor.org/pmrv/events/past-events.html
- An important database of photography on Flickr, organized according to the sites and thematic.
http://www.cifor.org/pmrv/multimedia/photo.html
- 2 project posters.
One poster in Indonesian presents the project and what participatory MRV is.
One poster in English and Indonesian presents what carbon is in a simple way, and why it is important. A translation in Spanish, Kiswahili and Amharic is in development.
http://www.cifor.org/pmrv/multimedia/posters.html

Case Study #2

Title: Biodiversity and carbon stocks in different land use types in the South Sudanian Zone of Burkina Faso, West Africa

Author: Houria Djoudi

Type: Capacity enhancement; Policy engagement;

Project Description:

Burkina Faso has been selected as a pilot country for the World Bank Forest Investment Program (FIP). REDD occurs therefore through this FIP mechanism which started in 2010 (WB and ADB). In 2011 different REDD projects were identified in a national workshop to be implemented through the PIF initiative. However, policy makers, practitioners and development agencies are facing several challenges. The first one is related to the lack of information regarding the comparative advantages of different approaches and practices on the carbon stock in different landscapes in the region. The second one is that the focus of national actions is on protected forest areas and land use decisions are currently based on poor understanding of tradeoffs regarding carbon effects of different land uses at the landscape scale. Additionally little is known about the impact of different governance systems and management models and practices on carbon stock and sequestration potential of forest areas. This project aims to address those challenges by providing information and enhance evidence oriented decision making. The outcomes expected by those actions are:

Fill gaps in the knowledge about carbon stock and sequestration in woodlands and savannah landscapes, by providing scientific evidences for policy

Provide tools to make operational the application of carbon stock monitoring in order to fulfill climate convention and initiatives (Burkina is the first FIP country in the Sahel)

Identify governance mechanisms, and community practices which result in reducing emissions.

Contribute to a sustainable and evidence based decisions for significant ongoing projects in the entire West African region (PIF program and the Great Green Wall)

Provide scientific results for environmental Ministry and forest administration to enhance evidence based forest management plans and policies

Contribute to capacity building for staff and technicians in national institutions

Introduction / objectives:

1. Compare the carbon stock in different land uses including agroforestry parklands, fallows, reforested areas and plantations
2. Compare carbon stock under contrasted governance regimes (strictly protected areas, community forestry, private planted forests)
3. analyze the impact of different governance systems on carbon stock and sequestration
4. Provide scientific evidences on carbon stock in different landscapes and different management practices in order to allow evidence-based decision-making land use plans and policies
5. Explore linkages between adaptation and mitigation by investigating the impact of strategies on carbon stock and future role of carbon in adaptive strategies

Project Results:

One of the interesting result was found in the Ziro region where a community managed forestry program was introduced by the state in the 80ies. The result suggest that overall community managed forest appeared the most productive in term of above-, belowground and soil carbon stock compared to state protected forest. Also Vitellaria (Shea butter tree) parklands which are managed by farmers where suitable tree density is left on the cropping field (for instance 100 trees/ha), had high contribution to carbon storage (above and below ground carbon and soil C stock) and could be promoted as practice which, apart from allowing tree-crop integration, will at the same time contribute to both climate mitigation and adaptation by providing livelihood diversification. Soil was the most important pool of carbon stock in our study sites and the overall mean values of SOC-stock (39 - 67 Mg C.ha-1 in Ziro and 36 – 49 Mg C.ha-1 in Balé) although measured at a depth of 50 cm, were comparable to the average SOC density (to a depth of 1 m) documented in the literature for West Africa. Land use types with high aboveground carbon in Ziro (for instance, CMF) tended to indicate high soil carbon stock. The study also revealed that diversifying species in a land use type could have an effect on above- and belowground biomass production as corroborated by the significant and high correlations found between richness and these two biomass pools. In terms of gender outcomes, it's clearly that well-managed Shea butter parklands as well as community managed forests, where women have access to NTFP, contribute to enhance carbon storage and at the same time increase the adaptive capacity of women by providing livelihood diversification.

Partners:

Institut d'Environnement et de Recherches Agricoles (INERA)

Case Study #3

Title: Supporting the implementation of the Kenyan climate change action plan with a tool to target CSA practices

Author: Mariana Rufino, Patric Brandt, Catherine Mungai

Type: Inter-center collaboration; Innovative non-research partnerships; Capacity enhancement;

Project Description:

In 2013, CCAFS partnered with the Ministry of Environment Water and Natural Resources to hold a side event in Bonn during the thirty-eighth session of the Subsidiary Body for Scientific and Technological Advice (SBSTA). It was during this meeting that the need to support the implementation of the NCCAP in the agriculture sector was identified. CCAFS organised a series of workshops to bring stakeholders from different sectors together to identified concrete steps on how implement the ideas embedded into the Kenya action plan published in 2013. The need for analytical support to guide the decision making process was identified in early 2014. As a result CIFOR and ILRI started the development of a database and a tool that would guide such process, combining expert opinion and existing information. The tool was developed and presented to a diverse group of stakeholders, who assessed the usefulness of the tool. The research team visited the head of the climate secretariat early this year to discuss the selection of a real case to apply the method developed with the participation of all the sectors. We expect the tool to be useful for supporting similar processes across East Africa.

Introduction / objectives:

A team of scientists from CIFOR and ILRI, interacting with stakeholders representing government, academia, NGOs, and the private sector, defined the key elements the targeting tool for CSA would need to contain. The objective was to develop a tool that would be flexible enough to capture qualitative information (stakeholder ranking of practices) and quantitative descriptions of the system where the practices would be implemented. The tool had to be simple enough so that stakeholders would understand how it works and the results produced.

Project Results:

We have compiled a comprehensive spatially-explicit database that can be used in combination with the tool to identify areas where CSA practices could be applied and would address stakeholders demand to adapt and mitigate to climate change. The tool captures stakeholders opinion and their ranking of vulnerability to climate change and preference of CSA practices to address the effects of climate change. The last consultative workshop showed that there is interest across the sectors to link vulnerability with CSA, and that the tool and databases can inform ongoing projects at national and more local level. In the course of 2015 the research team will be exploring the use of the developed products in Kenya, and test the applicability in Uganda.

Partners:

Center for International Forestry Research (CIFOR)

International Livestock Research Institute (ILRI)

Ministry of Environment Water Natural Resources (MEWNR)
Ministry of Agriculture, Livestock and Fisheries (MoALF)

Links / sources for further information:

Blog story - http://ccafs.cgiar.org/blog/tackling-climate-change-kenya-holds-first-national-adaptation-planning-meeting-agriculture#.VNe6__mUfPo

Kenya National Climate Change Action Plan 2013 – 2017 http://cdkn.org/wp-content/uploads/2013/03/Kenya-National-Climate-Change-Action-Plan.pdf

5. Outcomes.

Outcome #1:

IPCC Emission factors

What is the outcome of the research (i.e. use of research results by non-research partners)?

IPCC published the Wetlands Supplement in 2014 after acceptance at the October 2013 plenary, with new peatland emission factors derived largely from CCAFS research. Some NGOs had tried to manipulate the process to get very high emission factors. Wetlands International filed a formal error claim which the Coordinating Lead Authors rebutted. The rebuttal was endorsed by the Initial Review Group, as per the IPCC error protocol. The new emission factors are now available for all Tier 1 inventories.

What outputs produced in the three preceding years resulted in this outcome?

Several papers over the past years on GHG emissions from tropical peatlands published by K. Hergoualc'h, L. Verchot, D. Murdiyarso, and L.-P. Comeau. These papers were reported as deiliverables in the respective years.

What partners helped in producing the outcome?

ICRAF, Indonesian Soils Research Institute

Who used the output?

All developing countries with agricultural activities in peatlands.

How was the output used?

National greenhouse gas inventories. note beginning in 2020, all countries will have to sbmit their inventories to the UNFCCC biennially.

What is the evidence for this outcome? Specifically, what kind of study was conducted to show the connection between the research and the outcome? Who conducted it?

Adoption of the Wetlands Supplement by the IPCC; Warsaw framework decisions in the UNFCCC.

Outcome #2:

Indonesia REL

What is the outcome of the research (i.e. use of research results by non-research partners)?

Countries are submitting reference emission level estimates to the UNFCCC as REDD+ begins. CIFOR is providing scientific backstopping to several countries, supporting preparation of submissions, in particular, Indonesia. The country adopted IPCC Tier 1 emission factors (funded partly through CCAFS) for agriculture and forestry on peatlands as Tier 2 estimates. The rationale is that all data used to generate the IPCC Tier 1 emission factors for drained peatlands are from Southeast Asia and thus are reasonable estimates of regional emissions.

What outputs produced in the three preceding years resulted in this outcome?

Several papers over the past years on GHG emissions from tropical peatlands published by K. Hergoualc'h, L. Verchot, D. Murdiyarso, and L.-P. Comeau. These papers were reported as deiliverables in the respective years.

What partners helped in producing the outcome?

Forestry Research and Development Agency (Indonesian ministry of Forestry), Indonesian Soils Research Institute

Who used the output?

Government of Indonesia, UNFCCC

How was the output used?

Submitted to UNFCCC

What is the evidence for this outcome? Specifically, what kind of study was conducted to show the connection between the research and the outcome? Who conducted it?

Submission of REL to UNFCCC

7. Outcome indicators.

Outcome Indicator:

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

Achievements:

CIFOR and ILRI with the support of the CCAFS East Africa program developed a tool to target CSA in line with the demand to select areas for investment, defined in the Kenyan Climate Change Action plan. Stakeholders (the climate change secretariat hosted at the Ministry of Environment) has shown interest to apply our tool to real case study. This will be defined in the coming months.

Evidence:

We have had several meeting with the stakeholders participating of the refinement of the climate change action plan and several communication via email. We are hosting a meeting at the Mazingira laboratory hosted at ILRI at the beginning of March to define next steps.

Outcome Indicator:

Findings and evaluation tools on mitigation and livelihoods benefits of alternative agricultural development pathways used by global agencies and decision-makers in two countries in each of the three regions

Achievements:

The global hotspots for GHG emission work partly funded by CCAFS, and conducted in collaboration between CIFOR-ILRI-ICRAF and Wageningen University was presented at the Global Landscape Forum in Lima in December 2014. After the research was presented, a representative from USAID approached to show their interest to use the research to prioritise their future funding priorities.

Evidence:

CIFOR and WUR are discussing at the moment with USAID the format needed for the research to be useful to set research and funding priorities

Outcome Indicator:

Decision-makers in three regions better informed re options and policy choices for incentivizing and rewarding smallholders for GHG emission reductions

Achievements:

The tool developed by CIFOR and ILRI to target CSA interventions at national level under Theme 4 include important aspects for mitigation in smallholder agriculture. We have created awareness among stakeholders representing the governments of Kenya and Uganda on the need to evaluate tradeoffs and synergies between adaptation and mitigation goals.

Evidence:

We have been invited by the a group of stakeholders to contribute to the process of targeting CSA in Uganda, and to support setting priorities in Kenya.

Outcome Indicator:

Project design and monitoring guidelines for smallholder agriculture in developing countries produced and contributing to global standards

Achievements:

CIFOR contributed to the development of the Guidelines for Assessing Low--Emissions Options for Smallholder Agriculture, Edited by Rosenstock TS, Richards M, Rufino MC, Wollenberg E, Butterbach--Bahl K. The book will be published soon and made freely available. This will contribute to improving the standards to assess mitigation opportunities for smallholder agriculture

Evidence:

The individual chapters are available online at http://www.samples.ccafs.cgiar.org/samples-protocol.html

Outcome Indicator:

Global database and set of tools for climate-smart agriculture established and used by key international and regional agencies

Achievements:

CIFOR and ILRI with the support of the CCAFS East Africa program developed a tool to target CSA in line with the demand to select areas for investment, defined in the Kenyan Climate Change Action plan. Stakeholders (the climate change secretariat hosted at the Ministry of Environment) has shown interest to apply our tool to real case study. This will be defined in the coming months.

Evidence:

We have had several meeting with the stakeholders participating of the refinement of the climate change action plan and several communication via email. We are hosting a meeting at the Mazingira laboratory hosted at ILRI at the beginning of March to define next steps.

8. Leveraged funds.

There is no Leverage funds

9. Publications.