Title: Innovative Approaches in Organizing and Sustaining Climate Smart Villages in SEA

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2017	RP SEA	Leocadio, Sebastian <l.sebastian@irri.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2	Complete	IRRI - International Rice Research Institute - Philippines	Leocadio, Sebastian <l.sebastian@irri.org>

Project is working on

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

Region(s)
SEA: Southeast Asia

Project summary

The CSVs in Southeast Asia are the convergence points of different interventions that will be implemented by different projects funded by CCAFS and those of other project operating in the CSVs. In order to maximize the benefits to the community and the learnings coming from implementation of the different activities, there is a need to have a strong community organization and local capacity to engage with the different implementors. CCAFS through the lead center has selected a community organizer for each of the CSVs. Furthermore, the local community organizations will also be strengthened. This project will provide the needed coordination, capacity development and documentation of the learning from the different CSV. It will specifically strengthen the capacity of the target communities in developing and implementing local climate change adaptation plans.

2. Partners

Partner #1 (Leader)

Institution: IRRI - International Rice Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Leocadio, Sebastian <l.sebastian@irri.org>	coordinate project activities monitor and evaluate project performance	HQ
Partner	Panda, Architesh <a.panda@irri.org>	Activity 2014-261 *Partner*.	HQ
Partner	Dang Phong, Ngo <N.Phong@irri.org>	Activity 2014-261 *Partner*.	HQ
Partner	Tan Yen, Bui <y.bui@irri.org>	Activity 2014-259 *Leader*. Activity 2014-261 *Leader*.	HQ

Partner #2

Institution: IIRR - International Institute of Rural Reconstruction

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Gonsalves, Julian <juliangonsalves@yahoo.com>	Activity 2014-259 *Partner*.	HQ

Partner #3

Institution: Cantho University-Vietnam

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Hieu Trung, Nguyen <nhtrung@ctu.edu.vn>	Activity 2014-259 *Partner*.	HQ

Partner #4

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Campilan, Dindo <d.campilan@cgiar.org>	Activity 2014-261 *Partner*.	Hanoi, Vietnam

Partner #5

Institution: ICRAF - World Agroforestry Centre

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Catacutan, Delia <d.c.catacutan@cgiar.org>	Activity 2014-261 *Partner*.	Los Baños, Philippines

Partner #6

Institution: IWMI - International Water Management Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Pavelic, Paul <p.pavelic@cgiar.org>	Activity 2014-261 *Partner*.	Vientiane, Lao PDR

Partner #7

Institution: WorldFish - WorldFish

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Kura, Yumiko <Y.Kura@cgiar.org>	Activity 2014-261 *Partner*.	HQ

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

Year	Lesson(s)
2016	We need to have more efforts together with partners to develop proposals for bilateral funds to implement more CSV activities and expand ongoing CSV activities

Partnerships overall over the last reporting period:

The project engaged the different partner organizations operating within and outside in the CSVs in implementing various activities. The partners contributions were very important in the successful implementation of the activities. Some partners listed in the project document were not engaged due to reduced activities.

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Country			Philippines
Climate Smart Village Sites	21.764	105.023	Ma
Climate Smart Village Sites	17.997	106.161	My Loi
Climate Smart Village Sites	9.369	105.672	Tra Hat
Climate Smart Village Sites	16.541	105.127	Pailom
Climate Smart Village Sites	18.358	102.463	Ekxang
Climate Smart Village Sites	13.185	103.247	Rohal Suong

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:
At the end of 2018, international and national organizations in 3 target countries (Vietnam, Laos and Cambodia) will productively use this innovative approach in organizing and maintaining sustainable Climate-Smart Villages. National teams with rich experiences will be able to develop, implement and manage projects at CSV and Climate-Smart landscape level. This means that the community-based approach together with techniques and tools provided by CCAFS will not only be used at the pilot CSV but many surrounding villages and communities. In each country, the trained national team will play an important role in connecting and organizing activities of multiple CCAFS projects, thus, CSA will be implemented in an integrated way. This helps to ensure the success of CCAFS in the region. Furthermore, the national team will be able to effectively support and develop future R&D projects in the region during and after CCAFS program.

Annual progress towards outcome (end of 2016*): By the end of 2016, opportunities and constraints in implements CSA practices have been analyzed. The integrated practices that best-fit with interest of farmers and organizations and other stakeholders have been demonstrated in many places in the region. Therefore, local community at the pilot CSVs start to adopt interventions made by CCAFS. In addition, innovative practices introduced by CCAFS are also well acknowledged by surrounding communities through meetings and cross-field visits.

Annual progress towards project outcome in the current reporting cycle (2016*): In 2016, CCAFS SEA continued to build the capacities of farmers, village leaders and local partners through training and social mobilization activities as follows: 1) A two-day training workshop on CSA was conducted with the Farmers' Union of the Ha Tinh province (Vietnam), which resulted in 13 CSA models suitable for the landscapes of the province as designed by the 51 participants. 2) Following the success of the first roving workshop in the Philippines, a second roving workshop was conducted in Vietnam. Participants from the six CSVs saw demonstrations of CSA and innovative agricultural technologies. An outcome of the roving workshop was the duplication of the bio-garden and crop residue and livestock waste management practices in 3 CSVs. Other new techniques (i.e. fruit tree management and use of living-bed technology for pig and chicken raising) were also adopted and applied in CSVs. Some practices (e.g. vermiculture and living-bed) were scaled out in other provinces in Vietnam. Field visits also facilitated farmer-to-farmer learning and information sharing among farmers in Vietnam, Laos and Cambodia. 3) The CSVs are now well organized through social mobilization activities. Farmers and village social groups (e.g. women's union, youth's union and farmer's union) and local government have started to engage in CCAFS activities. In addition, farming groups were established in CSVs. In Ha Tinh (Vietnam), farming groups developed their annual action plans and strategies with technical support of CCAFS partners. Through the Rapid Monitoring and Evaluation (RM&E) framework developed in 2016 for SEA CSVs, researchers found that techniques and practices, which were picked up by farmers for their added value to household incomes and livelihoods, were adopted faster than the ones introduced by research partners. This proved the important role of cross-field visits and farmer learning platforms in scaling up and out of CSA technologies and practices

How communication and engagement activities have contributed to achieving your Project outcomes:* Various communication products (blogs, newsletters, video clips, Photovoice) were also produced to inform rural communities of climate change and climate-responsive actions, and introduce CCAFS initiatives (many in in local languages). Local government, climate stations, social unions and students in university were also engaged in disseminating information on CCAFS to farmers in surrounding rural communities. In CSVs in Vietnam, the most effective communication tool that has been implemented is the loud-speaker system in the Ma CSV (Vietnam). Daily weather information and farming advisories broadcasted by this system can reach 90% of households in the village

Evidence documents of progress towards outcomes:*

https://marlo.cgiar.org/data/ccafs/projects//113/projectOutcome/P113_Evidence%20of%20progress%20towards%20outcomes.docx

Annual progress towards outcome (end of 2015): By the end of 2015, participatory techniques and skills have been used by national team and partners to develop and implementation local climate change adaptation plan. Decision support tools at household and community levels have been developed and tested at CSVs. Feasible activities for climate change adaptation and mitigation have been identified based on situation analysis and needs assessment with the support of the decision support tools and participation of multiple stakeholders

Annual progress towards outcome (end of 2017): By the end of 2017, constraints in implementation of CSA have been overcome. Local community well adapted climate change interventions and continue to implement CSA. Furthermore, national and international partners together with trained CSV teams have expanded the interventions on surrounding villages. During this year, several cross-field visits and national and international meetings/workshops are organized. The CSV model has become an example of modern rural form. This is highly aware and adopted by local governments.

Annual progress towards outcome (end of 2018): By the end of 2018, the innovative approaches in organizing and sustaining Climate Smart Villages have been documented and introduced widely in the region. More national CSV teams have been formulated to implement and manage CSVs in SEA.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* Techniques and practices, which were picked up by farmers for their added value to household incomes and livelihoods, were adopted faster than the ones introduced by research partners

4.2 CCAFS Outcomes

F2 (before F1 - Andy) Outcome 2019: National and subnational development initiatives and public institutions prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools.

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

2019
Target value: 2 **Cumulative target to date:** 3 **Target narrative:** Activity 2014-261: a tool for selecting priority CSA practices for implementation at household level and a tool for participatory land use planning will be developed and used by local partners to support their decision making on multiple criteria agriculture production (food security, income improvement, climate change adaptation and mitigation) **The expected annual gender and social inclusion contribution to this CCAFS outcome:** Women from local organizations will be involved in development and implement of the decision support tool.

2015
Target value: 0 **Cumulative target to date:** 0 **Target narrative:** <Not Defined> **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

2016
Target value: 1
Cumulative target to date: 1
Target achieved: 1.0
Target narrative: The trained national team will be able to use CCAFS tools to support decision making process at target communities
Narrative for your achieved targets, including evidence: Following the Participatory Land use Planning (PLUP) approach designed in 2015 for development of climate-responsive land use plans at the community level, a decision-support tool for facilitating land use planning at household level (HH-PLUP) had been developed by CCAFS SEA and adopted by Can Tho University. The tool was revised to the specific context of the Tra Hat CSV and will be applied by households in 2017
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Ms. Nguyen Thi Song Binh (Economist) and Ms. Nguyen Vo Chau Ngan (Environmental scientist) from Can Tho University have joined the HH-PLUP development team. They are also resource persons who will contribute to the HH-PLUP implementation in 2017
The expected annual gender and social inclusion contribution to this CCAFS outcome: Women from local organizations will be involved in development and implement of the decision support tool.

2017
Target value: 0
Cumulative target to date: 1
Target narrative: <Not Defined>
The expected annual gender and social inclusion contribution to this CCAFS outcome: <Not Defined>

Major Output groups:

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

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

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

F2 (before F1 - Andy) Outcome 2019: 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

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

2019
Target value: 3 **Cumulative target to date:** 5 **Target narrative:** Activity 2014-261: national institutes and private companies/enterprises, which are responsible/doing business for/in cultivation, livestock and fishery production will use incentive mechanisms to promote climate smart approaches **The expected annual gender and social inclusion contribution to this CCAFS outcome:** Social organizations (farmer union, women union, youth union, etc.) are willing to participate in CCAFS activities

2015
Target value: 0 **Cumulative target to date:** 0 **Target narrative:** <Not Defined> **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

2016
Target value: 2 **Cumulative target to date:** 2 **Target achieved:** 2.0 **Target narrative:** At least 2 national institutes and/or private companies/enterprises will be involved in developing new incentive mechanisms for promoting CSA practices **Narrative for your achieved targets, including evidence:** Starting 2016, the People's Committee of Ky Son Commune and the Farmer's Union of Ha Tinh province together with My Loi village leader and CCAFS team supported an incentive mechanism, namely the "community innovation fund", to promote the CSA initiatives of farming groups in the My Loi CSV. Accordingly, the four farming groups each manage a small seed fund of 2,500 USD. Members of the group, who have new initiatives can access this fund for initial investment **Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome:** Results of the Rapid M&E conducted in the CSVs proved that social organizations including the Farmer's Union, Women's Union and Youth's Union have actively joined in and contributed to CCAFS training activities and CSA demonstration in CSVs. In Tra Hat and My Loi CSVs, at least one practice was led by women group. Farming groups in CSVs (e.g. fishing group in Rohal Suong and Ma; vegetable and livestock groups in Ekxang, My Loi, Ma; rice production group in Pailom, Rohal Suong and Tra Hat, etc.), with technical support from CCAFS, frequently meet to share farming information and experience. **The expected annual gender and social inclusion contribution to this CCAFS outcome:** Social organizations (farmer union, women union, youth union, etc.) are willing to participate in CCAFS activities

2017
Target value: 0 **Cumulative target to date:** 2 **Target narrative:** <Not Defined> **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

Major Output groups:

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

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:
The project focuses on the implementation of CSVs (To Go sites) which are also the convergence of various Flagship activities and therefore supports other CCAFS Impact pathways.

Collaborating with other CRPs

<This project does not have a CRP selected yet.>

4.4 Case Studies

No case studies added

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2019 contribution towards the selected MOG:** <Not Defined> **Brief`2019 plan of the gender and social inclusion dimension of the expected annual output:** <Not Defined>
F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2019 contribution towards the selected MOG:** <Not Defined> **Brief`2019 plan of the gender and social inclusion dimension of the expected annual output:** <Not Defined>
F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2019 contribution towards the selected MOG:** <Not Defined> **Brief`2019 plan of the gender and social inclusion dimension of the expected annual output:** <Not Defined>

Major Output groups - 2016

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

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: Tools for participatory land use planning for climate change adaptation strategies (PLUP-CC)

Brief summary of your actual 2016 contribution towards the selected MOG: The guidelines for participatory and community-based land use planning (PLUP-CC) was refined and disseminated. In addition, the guides to conducting the Rapid Monitoring and Evaluation of Climate-Smart Village in Southeast Asia were also developed and shared among CSV-led centers.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: Gender inclusion in PLUP-CC will be taken into condideration

Summary of the gender and social inclusion dimension of the 2016 outputs: In the PLUP-CC guidelines, the balance of the genders and ages of participants is strongly recommended.

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

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: Site specific conditions obtained from the Situation Analysis and Need Assessment at CSVs will be used to select and demonstrate CSA options

Brief summary of your actual 2016 contribution towards the selected MOG: CSA practices introduced are relevant to CSV bio-physical and social conditions. Many CSA demonstrations were adopted by farmers. For example, rice straw management was introduced and adopted in all CSVs; advanced livestock management in Ma, My Loi, Tra Hat and Pailom; and drought tolerant rice varieties in Pailom and Ekxang.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: Women and social organization will be involved in selecting and promoting CSA options Community leaders, community organizer and community implementors participate in training, meetings

Summary of the gender and social inclusion dimension of the 2016 outputs: In 2016, social organizations actively participated in testing and demonstrating CSA options in all CSVs. Women's groups also lead CSA practices (e.g. domestic waste management in Tra Hat, advance livestock raising in My Loi). Village leaders, advanced farmers and local staff participated in the roving workshop and field visits.

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

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: First version of a optimization tool at household level

Brief summary of your actual 2016 contribution towards the selected MOG: The first version of the land-use decision support tool was developed for household level. The tool was calibrated with actual household conditions. It is now being piloted in Tra Hat CSV by Can Tho University.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: not applicable

Summary of the gender and social inclusion dimension of the 2016 outputs: The HH-PLUP tool is for household land use planning. It will be implemented with different household groups but does not take gender differentiation into consideration.

Major Output groups - 2015

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

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

Brief summary of your actual 2015 contribution towards the selected MOG: Training on PLUP-CC was conducted for local partners. CSV teams successfully used PLUP-CC to develop local climate change adaptation plan. Village leaders learned CSA practices during a roving workshop in the Philippines. Two CSVs have demonstrated learned techniques at the villages. Field visits and meetings were conducted for cross-CSVs learning

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

Summary of the gender and social inclusion dimension of the 2015 outputs: 50% of participants attended meetings are women. Gender roles in rice-based farming systems in Vietnam were documented. Women role was also included in PLUP-CC process. Special training topics were developed for women in Pailom. Women's group is involved in home gardening and school gardening in Ma and My Loi CSVs.

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

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

Brief summary of your actual 2015 contribution towards the selected MOG: Various activities were conducted based on the needs of farmers identified through Situation analysis and Needs Assessment. Trainings on topics demanded by farmers were organized in Tra Hat, Ekxang, Pailom CSVs. Daily climate information was provided in Ma CSV. Demonstrations of gardening were implemented in Ma and My Loi CSVs.

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

Summary of the gender and social inclusion dimension of the 2015 outputs: Gender inclusion is always considered in any activity

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

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

Brief summary of your actual 2015 contribution towards the selected MOG: The first version of guidelines for PLUP-CC was developed. CSV teams evaluated potentials and limitations of bio-physical resources and developed climate change adaptation plan with communities. Reports were submitted. A farm scale optimization tool has been developed and being improved for validation.

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

Summary of the gender and social inclusion dimension of the 2015 outputs: Developing tools and guidelines is gender-less consideration

Major Output groups - 2014
F2 (before F1 - Andy): Innovative knowledge management systems (ICT, information network, multi-stakeholder platforms, learning alliances, fora etc) and strategic engagements approaches and partnerships that promote access, co-creation, capacity building, learning, 2 ways sharing and dissemination of CSA information and tools to farmers, extension services, agro-dealer networks, local governments, private sector, academia etc. (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2014 contribution towards the selected MOG:** <Not Defined> **Brief summary of your actual 2014 contribution towards the selected MOG:** <Not Defined> **Brief`2014 plan of the gender and social inclusion dimension of the expected annual output:** <Not Defined> **Summary of the gender and social inclusion dimension of the 2014 outputs:** <Not Defined>
F2 (before F1 - Andy): Context specific (targeted) suitable CSA options and portfolios that build on traditional knowledge, meet the needs of farmers and enhance productivity, adaptive capacity, food security and social equity (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2014 contribution towards the selected MOG:** <Not Defined> **Brief summary of your actual 2014 contribution towards the selected MOG:** <Not Defined> **Brief`2014 plan of the gender and social inclusion dimension of the expected annual output:** <Not Defined> **Summary of the gender and social inclusion dimension of the 2014 outputs:** <Not Defined>
F2 (before F1 - Andy): Biophysical, socio-economical and tradeoffs analyses (incl. enabling environments and gender), innovative methods, engagement approaches and customized decision support tools for CSA prioritization, wide scale adoption, local adaptation and investment planning (LAM, WA, EA, SA, SEA) **Brief bullet points of your expected annual 2014 contribution towards the selected MOG:** <Not Defined> **Brief summary of your actual 2014 contribution towards the selected MOG:** <Not Defined> **Brief`2014 plan of the gender and social inclusion dimension of the expected annual output:** <Not Defined> **Summary of the gender and social inclusion dimension of the 2014 outputs:** <Not Defined>

5.2 Deliverables

D2953 - Trained community leaders, community organizer and community implementors

Main Information

Type: Training materials

Subtype: User manual/Technical Guide

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: https://www.dropbox.com/s/ld8rx90lpkx5qqa/P113_Evidence%20of%20progress%20towards%20outcomes.docx?dl=0

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: List of outputs

Description / Abstract: The deliverable 2953 includes a number of outputs generated by partners. The list of project outputs with links is provided in a separate file, named "P113_Evidence of progress towards outcomes.docx", which can be access at https://www.dropbox.com/s/ld8rx90lpkx5qqa/P113_Evidence%20of%20progress%20towards%20outcomes.docx?dl=0

Publication / Creation date: 2017-02-01

Language: English

Country: Asian countries

Keywords: Climate-smart villages, Southeast Asia, CCAFS

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
IRRI - International Rice Research Institute	Leocadio, Sebastian <l.sebastian@irri.org>	Responsible

5.3 Project Highlights

Project highlight 177

Title: Roving workshop - a new platform to facilitate the farmer-to-farmer learning process

Author: CCAFS SEA	**Subject:** Roving workshop
Publisher: CCAFS	**Year reported:** 2016
Project highlights types: ● Capacity enhancement	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: Roving workshop, capacity building, farmer-to-farmer learning	**Countries:** Vietnam

Highlight description: Although villages and communities may experience different impacts of climate change, knowledge could still be shared with others experiencing the same conditions. The roving workshop is a platform for facilitating the farmer-to-farmer learning process through field visits and discussions. The workshop is organized yearly in Southeast Asia for village leaders, farmers and local partners. In 2016, CCAFS SEA organized a roving workshop for Southeast Asian farmers and partners to learn about the CSA practices being done in northern Vietnam. Nineteen village leaders and farmers from the six Climate-Smart Villages in Vietnam, Lao PDR and Cambodia went around Phu Tho, Yen Bai, Hai Duong, Ha Noi and Ha Tinh provinces to learn about different climate-smart agriculture techniques and practices. Researchers from the International Rice Research Institute (IRRI), International Center for Tropical Agriculture (CIAT) and World Agroforestry Centre (ICRAF) Vietnam also participated in the roving workshop. After the workshop, participants developed action plans for applying/testing relevant CSA technologies and practices in their own farm and villages.

Introduction / Objectives: To effectively address climate-related issues and promote relevant CSA practices in CSVs, it is important to strengthen the capacities of village leaders, farmers and local partner, and help them explore different CSA options. In 2016, CCAFS SEA organized a roving workshop for Southeast Asian farmers and partners to learn about the CSA practices being done in northern Vietnam. The main objective of the roving workshop are: • To enhance understanding of participants of climate-smart agriculture through experiential learning; • To enhance capacities of

participants in facilitating on-the-ground climate-smart agriculture practices

Results: The roving workshop was organized from 22 to 28 May 2016. Nineteen village leaders and farmers from the six Climate-Smart Villages in Vietnam, Lao PDR and Cambodia went around northern Vietnam (Phu Tho, Yen Bai, Hai Duong, Ha Noi and Ha Tinh provinces) to learn about different climate-smart agriculture techniques and practices. Researchers from the International Rice Research Institute (IRRI), International Center for Tropical Agriculture (CIAT) and World Agroforestry Centre (ICRAF) Vietnam also participated in the roving workshop. In Yen Bai and Ha Tinh provinces, participants visited demonstrations of home gardens, advanced livestock management, composting and crop residue management. They also learned how to diversify agricultural products for improving household incomes and livelihood resilience. Participants also saw how innovative practices help communities adapt to unfavorable conditions and impacts of climate change. Practices for mitigation of methane (a greenhouse gas) emissions from livestock production were also introduced. Traditional manure processing, which is unsanitary and emits methane, was replaced with new techniques. During the roving workshop, participants learned how to use alcohol yeast as an effective micro-organism for making compost from manure through the living bed technology. They also saw the benefits of vermiculture from different models in Yen Bai, Ha Noi and Ha Tinh provinces. Demonstrations of CSA practices and climate-resilient crop varieties, such as drought-tolerant and early maturing rice varieties developed by research institutes, were introduced to the farmers. The farmers and researchers also discussed management practices, such as integrated farming systems, greenhouse vegetable farming and rice management at the field level. They explored how to adapt these options to specific conditions in their villages. On the last day of the roving workshop, participants developed action plans for applying/testing relevant CSA technologies and practices in their own farm and villages.

Partners: Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI) Farmer's Union of Hanoi International Rice Research Institute (IRRI) International Center for Tropical Agriculture (CIAT) World Agroforestry Centre (ICRAF) International Institute for Rural Reconstruction (IIRR)

Links / Sources for further information:
https://ccafs.cgiar.org/news/southeast-asian-farmer-leaders-learn-about-climate-smart-agriculture-vietnam#.WKS1fU-cZZp
https://ccafs.cgiar.org/blog/viet-khmer-lao-farmer-leaders-commit-climate-smart-agriculture#.WKSsRU-cZZo
https://ccafs.cgiar.org/news/farmers-envoys-climate-smart-agriculture-villages-southeast-asia#.WKSsUE-cZZo

6. Activities

A259 - Building local partners? capacity in CSV implementation

Description: After the conduct of baseline surveys, SEA CSVs will start implementing CSA interventions in 2015. This includes a series of activities that will build the capacities of community leaders, community organizer and project implementers in participatory approaches and other skills that will help integrate and make the implementation of activities in the CSV participatory more effective.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: IRRI - International Rice Research Institute Tan Yen, Bui <y.bui@irri.org>
Status: On-going

Overall activity or progress made during this cycle: Training workshops on topics requested by villagers were organized in CSVs. Farmers groups were established to facilitate farmer-to-farmer learning. Field visits were also organized for cross-CSV learning. A roving workshop was conducted for village leaders and local authorities. Demonstrations were established in CSVs based on ideas obtained from the roving workshop. Regarding climate information services, a loudspeaker system was built in the Ma CSV for broadcasting to farmers climatic data acquired from a nearby climate station. For capacity building, CSV team was supported in improving their English literacy. Some of them are now confident in writing English reports. A training workshop on participatory land use planning for climate change adaptation strategy (PLUP-CC) was conducted for the six CSV teams. They were able to implement the PLUP-CC and develop climate change adaptation plans with the local communities. Together with the highlights of SANA, findings of PLUP-CC suggest future CCAFS interventions.

Deliverables in this activity:

- D1061: Trained community leaders, community organizer and community implementors
- D2953: Trained community leaders, community organizer and community implementors

A261 - Implementing participatory approaches in developing community based CSV Plans and integrated CSA interventions

Description: The activity will support the activities in the CSVs that are co-designed and planned by the community members, partner organizations and lead center. A community organizer is deployed in each CSV under this activity to coordinate and help integrate the different interventions in the CSVs. The activity will also support a comprehensive development of community plans that can serve as a guide for different development interventions in the CSVs.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: IRRI - International Rice Research Institute Tan Yen, Bui <y.bui@irri.org>
Status: On-going

Overall activity or progress made during this cycle: Based on the guidelines developed by CCAFS partners and improved by CSV team members, the PLUP-CC was implemented in all CSVs. Findings of the Situation Analysis and Need Assessments obtained in 2014, site-specific climate-related risks and potential land use types of CSVs were used in the discussion sections of PLUP-CC. In each CSV, villagers and stakeholders jointly evaluated bio-physical constraints of resources and identified adaptation plans. As the result, CSV stakeholders have developed and verified their own land use plans to maximize the potentials of the resources and cope with climate-related risks. A farm-scale optimization model has been developed in collaboration with Can Tho University and the Bac Lieu DARD. The tool is being improved to be applied in CSVs in 2016.

Deliverables in this activity:

- D1064: Decision support tools
- D2953: Trained community leaders, community organizer and community implementors

7. Leverages

No leverages added

Title: Partnerships on Mainstreaming Climate Smart Agriculture(CSA) with National Governments in SEA

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2017	RP SEA	Tan Yen, Bui <y.bui@irri.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2	Complete	IRRI - International Rice Research Institute - Philippines	Leocadio, Sebastian <l.sebastian@irri.org>

Project is working on

Flaship(s)
F1 (before F4 - Philip): Priorities and Policies for CSA

Region(s)
SEA: Southeast Asia

Project summary

The project aims to work with national government partners through the following: 1)integrate CCAFS generated information and knowledge in national policies and strategies; and 2) co- develop R4D programs or activities that responds to their national priorities and within the CCAFS priority themes. The integration of CCAFS generated information and knowledge will be done through active engagement with the priority countries in Southeast Asia through participation in their national strategy development activities and by supporting local initiatives at strategy development. The co-development of R4D agenda that respond to national priorities that are aligned with CCAFS flagships will be done through leveraging CCAFS activities and resources with local resources. This will put into context CCAFS R4D activities in the focus countries and the implementation of joint activities that responds to national priorities.

2. Partners

Partner #1 (Leader)

Institution: IRRI - International Rice Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Leocadio, Sebastian <l.sebastian@irri.org>	Provide leadership and guidance	HQ
Project Coordinator	Joven, Berna <b.joven@irri.org>	in-charge for communication	HQ

Partner #2

Institution: MARD - Ministry of Agriculture and Rural Development

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	VAN TRINH, MAI <maivantrinh@gmail.com>	Contact person	HQ

Partner #3

Institution: NAFRI - National Agriculture and Forestry Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Inthavong, Thavone <i_thavone@yahoo.com>	Contact person	HQ

Partner #4

Institution: MAFF - Ministry of Agriculture, Forestry and Fisheries

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Chan, Paloeem <chanphaloeun@gmail.com>	Contact person	HQ

Partner #5

Institution: DA - Department of Agriculture

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Ilaga, Alice <aliceilaga@gmail.com>	Contact person	HQ

Partner #6

Institution: MOAI - Ministry of Agriculture and Irrigation

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Hseng Hom, Nang <nanghsenghom@gmail.com>	Contact person	HQ

Partner #7

Institution: CCAFS/CRP7 - CGIAR Research Program on Climate Change, Agriculture and Food Security

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Leocadio, Sebastian <l.sebastian@irri.org>	Activity 2014-262 *Leader*. Activity 2014-263 *Leader*.	HQ

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

Year	Lesson(s)
2016	Continuous and sustained engagement with partners focusing on upscaling CCAFS science and outputs opens up opportunities for outcome.

Partnerships overall over the last reporting period:

We have continue to strengthen partnerships with national ministries of focus countries. We are also discussing with high level partners to find opportunities of collaboration and engagement. Overall, influence on policy requires sustained engagement thus progress on outcomes takes time

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Country			Vietnam
Country			Lao PDR
Country			Cambodia
Country			Myanmar (Burma)
Country			Philippines

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:
National agricultural ministries and line agencies are using CCAFS generated science based knowledge and processes for use in climate change planning in the agricultural sector and R and D prioritization setting. This can be in the form of moves to change current sectorial policies as influenced by CCAFs science based evidence or intimating to expand and integrate the use of planning tools in current planning processes. It can also be manifested in efforts of these ministries to leverage funding for CSA initiatives. The national agencies are also forming alliances to develope regional programs addressing common national priorities and strategies. At the same time, regional organisations such as ADB and ASEAN are closely working with national partners in developing regional programs for climate resilience and food security built around knowledge and processes from CCAFS-SEA leveraged projects. These two institutions are also investing in these regional programs through regional alliances.

Annual progress towards outcome (end of 2016*): For this year, continued efforts will be done in strengthening national capacity as well as identifying critical policy entry points. Follow-up activities will also be done to solidify gains in policy initiatives and knowledge achieved in the past year. Identified focal points from the two regional agencies (ADB and ASEAN) will already be more intensely engaged through proposal writing, co-development of intitiatives, and dialogues.

Annual progress towards project outcome in the current reporting cycle (2016*): 1. CCAFS continued supporting the Department of Science and Technology of MARD in developing the implementation plan for agricultural INDCs. MARD submitted the document last August 2016. CCAFS is also providing technical support in the ongoing development of Vietnam's National Adaptation Plans. 2. To operationalize Myanmar's CSA Strategy, CCAFS is supporting of the Ministry of Agriculture in developing projects for bilateral funding. CCAFS through IIRR conducted a roundtable discussion and scoping study that identified entry points for promoting CSA and CSV approach in Myanmar agriculture via CSV platforms in different agro-ecological zones. 3. FAO requested CCAFS' inputs in developing concept note of a possible GCF project in Vietnam focusing on agroforestry in the Central Highlands. Thailand's Department of Agriculture also worked with CCAFS (IIRR, IWMI, ICRAF, CABI, ICRISAT, IRRI) to develop concept notes for collaboration on climate change adaptation and mitigation in Thailand. 4. Responding to Vietnam's call, CCAFS organized a joint field assessment of El Nino-affected regions in Vietnam. The assessment team identified options to support planning in response to climate change. The team also identified potential entry points for interventions by CCAFS and CG centers. Following this, CCAFS and Department of Crop Production are developing climate-related risk maps and adaptive cropping systems for the Mekong River Delta (MRD) provinces. DCP will use the outputs to develop policies and strategies on rice production in the region. 5. CCAFS supported the ASEAN-CRN during the preparation of Myanmar's and Vietnam's (not submitted) SBSTA 44 submissions on the adaptation measures in agriculture, and on agricultural practices and technologies. 6. CCAFS participated in the ADB CSA meeting in Manila that discussed the research and development technical assistance on building sustainable food and nutrition security in Asia and the Pacific. CCAFS also participated in the workshops

organized by WB on the Mekong River Delta.

How communication and engagement activities have contributed to achieving your Project outcomes:* CCAFS SEA attended in and contributed to a number of workshops/meetings organized by government of Vietnam, Laos and Thailand, Philippines. CCAFS SEA also stimulated cross-CG centers actions in the region by convening experts from CG centers in joint actions. One of our efforts in strengthening communication and engagement was to maintain close contact with ministers and have frequent face-to-face meeting. We also co-developed action plan and co-implemented activities (drought assessment, mapping) with government agencies

Evidence documents of progress towards outcomes:*

https://marlo.cgiar.org/data/ccafs/projects//114/projectOutcome/P114_Evidence%20of%20progress%20towards%20outcomes.docx

Annual progress towards outcome (end of 2015): By end of 2015, at least one national agricultural agency in Vietnam, Philippines, Laos and Cambodia are a). incorporating CCAFS science in their agricultural R and D initiatives in specific testing locations; b). leveraging funds for research into climate resiliency and food security in general, and as it relates to the CSV concept, in particular. Most of the work in 2015 would be to strengthen capacity of national agencies, in these focal countries through CCAFS leveraged activities. These activities would mainly be through "soft" interventions, i.e. policy workshops, supporting policy studies. Some "hard" action research will also be done in selected areas.Thus no next-user outcome would be evident at this stage. However, work towards next-user outcome would be through identifying potential "pivot" people in the ADB and ASEAN. These people would be tapped later to facilitate next-user outcomes that would sustain national initiatives

Annual progress towards outcome (end of 2017): By this year a significant amount of knowledge useful for climate resiliency and food security policies have been achieved. National agencies are now strengthened and have clear perspective of the use and value of these CCAFS generated knowledge. Regional alliances will be formed and common regional policy entry points, within the context of the ASEAN integration, would have been identified at this point. ADB and ASEAN now has a clear identified role in the CCAFS policy initiatives.

Annual progress towards outcome (end of 2018): Next users, ADB and ASEAN are now working closely with national partners in crafting an enabling policy environment that would sustain both local and national policy in climate resiliency and food security.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* We need to interact with high level government agencies (ministry and it sub-units) to explore gaps and entry points. We also need to find opportunities to discuss face-to-face with policy makers to identify the needs for climate change, agriculture and food security interventions

4.2 CCAFS Outcomes

RP SEA Outcome 2019: Policy makers enhancing the design, investment decisions, implementation and monitoring and evaluation of agro - sectoral climate change policies through a transparent, coordinative and consultative mode from local to national level.

Indicator #1: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

2019
Target value: 2 **Cumulative target to date:** 4 **Target narrative:** ADB and ASEAN are now working closely with national partners in crafting an enabling policy environment that would sustain both local and national policy in climate resiliency and food security. **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

2015
Target value: 0 **Cumulative target to date:** 0 **Target narrative:** Initiatives for this year are ground working (i.e. identifying focal people at regional institutions ADB and ASEAN) as well as strengthening capacity of local partners in identifying policy gaps in food security and climate resilience, as well as implementing the needed policy initiatives. **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

2016
Target value: 2 **Cumulative target to date:** 2 **Target achieved:** 2.0 **Target narrative:** By the end of 2016, identified focal people in ADB and ASEAN are being involved in national and regional activities through dialogues and proposal writing. **Narrative for your achieved targets, including evidence:** In 2016, ADB launched the RDTA on building sustainable food and nutrition security in Asia and the Pacific that covered their CSA engagement. Key contacts with ADB were established but will require further engagement to firm-up links. CCAFS is now strongly linked with the ASEAN through the ASEAN Crop Resilience Network (CRN) that is currently chaired by Thailand. CCAFS provides technical inputs to the ASEAN CRN in many of its activities including supporting member countries (e.g. Laos, Myanmar and Thailand) draft proposals. **Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome:** Not applicable **The expected annual gender and social inclusion contribution to this CCAFS outcome:** not applicable

Major Output groups:

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

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:
This project contributed primarily to FP1 on priorities and policies for CSA. In addition to those in the highlights, the CSA prioritization framework of Vietnam was completed and CCAFS through CIAT revised the outputs to start development of the CSA country profile for Vietnam, as an input to national CSA strategies. The project also contributed to the FP3 through the activity supporting Vietnam NDC for agriculture.

Collaborating with other CRPs

<This project does not have a CRP selected yet.>

4.4 Case Studies

No case studies added

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

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

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

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

Major Output groups - 2016

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

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: National programs with CCAFS work integrated National CSA policies and development plans with CCAFS science integrated

Brief summary of your actual 2016 contribution towards the selected MOG: Through various engagement (meeting, workshops, assessment, etc.) CCAFS work resulted in 1) Vietnam's MARD including AWD in the INDC options in the agricultural sector and NDC implementation plan; 2) MARD using CCAFS climate information and recommendations for downscaling flood and salinity intrusion risk maps of the 13 provinces in MRD

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: Initial initiatives leveraged through CCAFS-SEA funding, will produce the evidence. Work and co-labor with national partners in generating evidence; Make a regional alliance with engagement of ADB and ASEAN built on CCAFS-SEA leveraged evidence; Use the regional alliance backed by CCAFS-SEA to initiate lasting and sustainable relationships with these institutions.

Summary of the gender and social inclusion dimension of the 2016 outputs: This activity do not have gender and social inclusion dimension as it focuses on integration CSA with national policies

Major Output groups - 2015

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

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

Brief summary of your actual 2015 contribution towards the selected MOG: CCAFS SEA supported and participated in a number of international, regional and in-country consultation workshops, in collaboration with regional and national key partners, and proceedings of most activities to push for the promotion and integration of CCAFS program in their respective agenda.

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

Summary of the gender and social inclusion dimension of the 2015 outputs: Gender dimensions were introduced by CCAFS through workshops and other media channels. The role of women and marginalised groups in climate change adaptation and mitigation efforts has been considered and included in the national climate resiliency and food security planning and programs

Major Output groups - 2014

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

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

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

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

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

5.2 Deliverables

D2834 - Integrating CCAFS work in national programs through joint CSA activities with key national partners

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: https://www.dropbox.com/s/7569w3eeo04f9hf/P114_Evidence%20of%20progress%20towards%20outcomes.docx?dl=0

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: Integrating CCAFS work in national programs through joint CSA activities with key national partners

Description / Abstract: The deliverable 2834 includes a number of outputs generated by partners. The list of project outputs with links is provided in a separate file, named "P114_Evidence of progress towards outcomes.docx", which can be access at https://www.dropbox.com/s/7569w3eeo04f9hf/P114_Evidence%20of%20progress%20towards%20outcomes.docx?dl=0

Publication / Creation date: 2017-02-01

Language: English

Country: Vietnam, Laos, Cambodia, Myanmar and Philippines

Keywords: CSA, CSV, policy engegement

Citation: <Not Defined>

Handle: <Not Defined>

DOI: <Not Defined>

Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
IRRI - International Rice Research Institute	Leocadio, Sebastian <l.sebastian@irri.org>	Responsible

D2442 - Integrating CCAFS science in national CSA policies and development plans

Main Information

Type: Reports and other publications

Subtype: Discussion paper/Working paper/White paper

Status: Complete

Year of expected completion: 2016

New expected year: <Not Defined>

Cross-cutting dimension:

- N/A

Deliverable dissemination

Is this deliverable already disseminated: Yes

Dissemination Channel: Other

Dissemination URL: https://www.dropbox.com/s/7569w3eeo04f9hf/P114_Evidence%20of%20progress%20towards%20outcomes.docx?dl=0

Open access: Yes

License adopted: No

Deliverable Metadata

Disseminated title: The drought crisis in the Central Highlands of Vietnam
Description / Abstract: This deliverable 2442 includes a number of outputs generated by partners. The list of project outputs with links is provided in a separate file, named "P114_Evidence of progress towards outcomes.docx", which can be access at https://www.dropbox.com/s/7569w3eeo04f9hf/P114_Evidence%20of%20progress%20towards%20outcomes.docx?dl=0
Publication / Creation date: 2017-02-01
Language: English
Country: Vietnam, Laos, Cambodia, Myanmar and Philippines
Keywords: CSA, CSV, policy engegement
Citation: CGIAR Research Program on Climate Change, Agriculture and Food Security- Southeast Asia (CCAFS-SEA) (2016). Assessment Report: The drought crisis in the Central Highlands of Vietnam. Hanoi, Vietnam.
Handle: <Not Defined>
DOI: <Not Defined>
Creator / Authors: <Not Defined>

Deliverable Quality check

FAIR Compliant: F A I R

Partners contributing to this deliverable:

Institution	Partner	Type
IRRI - International Rice Research Institute	Leocadio, Sebastian <l.sebastian@irri.org>	Responsible

5.3 Project Highlights

Project highlight 154

Title: Assessment of the drought and salinity intrusion in Vietnam

Author: CCAFS SEA	**Subject:** Assessment of the drought and salinity intrusion
Publisher: CCAFS	**Year reported:** 2016
Project highlights types: ● Capacity enhancement ● Inter-center collaboration ● Policy engagement	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: El-Nino impact, Vietnam, CSA options	**Countries:** Vietnam

Highlight description: Severe drought episodes and salinity intrusion hit Vietnam due largely to the 2015-2016 El Niño Southern Oscillation (ENSO) phenomenon, the second most severe since 1965. Two teams, composed of experts from CGIAR centers operating in Vietnam and local partners from national research organizations, appraised the extent and level of damages in the Central Highlands and the Mekong River Delta (MRD). Key informant interviews with provincial and district leaders and surveys with local farmers and households were also conducted to ascertain the direct impacts of the drought and salinity intrusion. Aside from recommending area-specific practices and management measures, the CGIAR centers also identified opportunities for research in development. The results of the assessments have been presented and shared with MARD, UN agencies, international aid agencies and donors, and INGOs. Following these assessments, CCAFS and the Department of Crop Production have developed climate-related risk maps and adaptive cropping systems for the Mekong River Delta (MRD) provinces. DCP will use the outputs to develop policies and strategies on rice production in the region.

Introduction / Objectives: The Vietnamese government called for support from the international community in addressing drought and salinity intrusion caused by the El Niño Southern Oscillation

(ENSO) phenomenon, to which the CGIAR centers operating in Vietnam responded. Joint field assessments were conducted with the CGIAR centers and local partners in the Central Highlands and MRD. The assessments also aimed to: provide location-specific and integrated recommendations to the current problems in the region that will improve the preparedness and coping capacity of the affected areas; identify possible CSA options for incorporation in current and future interventions; and identify R4D actions of CGIAR centers.

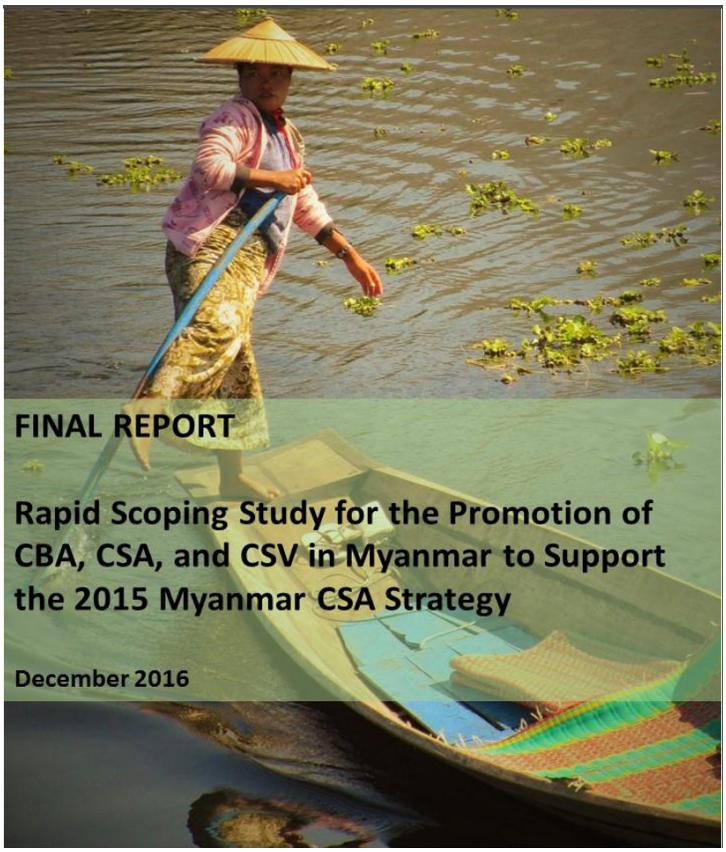
Results: Central Highlands experienced shortage of water supply for agricultural and domestic use due to the drought. Effects were most evident in the sloping lands and remote areas, where farming households and ethnic minorities live, thus, rendering these groups more vulnerable. The 214 dams in the region could not effectively provide irrigation water. Around 70% of the rain-fed cultivated areas also suffered from severe drought. Farmers recognized the value of innovative techniques however, they did not shift their farming practices due to technical and financial issues, and reduced outputs. Aside from drought, the Mekong River Delta experienced increased salinity intrusion which was connected to the decrease in water from upstream of the Mekong and the ENSO. Eleven of the 13 provinces in the MRD were greatly affected. Stress-tolerant crops, which can withstand increased salinity, droughts, floods and acid sulfate soils, were available but not yet used optimally due to an inconsistent policy on subsidies. The recommended measure for both Central Highlands and MRD is the scaling down of early warning systems and improving climate information services. For the Central Highlands, measures are the development of policies to encourage diversification, implementation of agroforestry to enhance watershed functions. Promoting stress-tolerant crop varieties, adjusting cropping calendars and cropping intensities, diversifying production systems and employing proper natural resource management, were some of the recommended adaptation strategies for MRD communities. The results of the assessments have been presented and shared with MARD, UN agencies, international aid agencies and donors, and INGOs. Following these assessments, CCAFS and the Department of Crop Production have developed climate-related risk maps and adaptive cropping systems for the Mekong River Delta (MRD) provinces. DCP will use the outputs to develop policies and strategies on rice production in the region.

Partners: IRRI, ICRAF, Bioversity International, IWMI, WorldFish Center, VAAS, VIFEP, CIAT, ILRI, WASI

Links / Sources for further information: Blog: Severe drought and salinity intrusion in Vietnam assessed by research centers Research centers respond to drought and salinity intrusion in Vietnam: https://ccafs.cgiar.org/research-highlight/severe-drought-and-salinity-intrusion-vietnam-assessed-research-centers#.WKa6QG99601 Report: The drought and salinity intrusion in the Mekong River Delta of Vietnam: Assessment Report -The drought crisis in the Central Highlands of Vietnam: https://cgspace.cgiar.org/handle/10568/75635 Working paper: Increasing resilience to droughts in Viet Nam: The role of forests, agroforestry, and climate smart agriculture: https://ccafs.cgiar.org/publications/increasing-resilience-droughts-viet-nam-role-forests-agroforestry-and-climate-smart#.WKphpX9SJnA

Project highlight 263

Title: Rapid scoping study for the promotion of CBA, CSA, and CSV in Myanmar to support the 2015 Myanmar CSA strategy



Author: CCAFS SEA	**Subject:** promotion of CBA, CSA, and CSV in Myanmar
Publisher: CCAFS	**Year reported:** 2016
Project highlights types: ● Participatory action research ● Policy engagement	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: Myanmar, CSA strategy, CSV promotion, scoping study	**Countries:** Myanmar (Burma)

Highlight description: This scoping study, which aims to assist CCAFS in implementing a climate-smart agriculture program including the establishment of Climate-Smart Villages in the country, was conducted by the International Institute of Rural Reconstruction in Myanmar. The study concluded that overall, the development community and the national research organizations are very enthusiastic and interested to explore and test the CSV approach in developing approaches for CSA promotion in the country. Opportunities for partnerships between local research stations, local NGOs and the local government (for instance the Department of Agriculture) provide a framework which might in the long run be a very sustainable and cost-effective approach to deriving location-specific

solutions for national governments. Addressing the local impacts of climate change while promoting adaptive capacities to deal with future climate risk must be demonstrated via a network of action research efforts on the ground, where evidence is established and out-scaled impacts are brought to the attention of planners and other decision makers. In addition, the study provided recommendations for CSA promotion via CSV platforms in different agro-ecological zones and for CSV establishment in Myanmar. Four agro-ecological zones in Myanmar (i.e. central dry zone, upland area, highland subzone of the upland and the delta region) were also identified for exploration as potential sites of CSVs.

Introduction / Objectives: Through the initiative of CCAFS, the Ministry of Agriculture and Irrigation of Myanmar developed the CSAA Strategy in 2015. The strategy laid out climate change impacts to agriculture in the country in broad terms, as well as the vision and goals of making agriculture in Myanmar climate smart. A scoping study was conducted by CCAFS through IIRR to assist in implementing a climate-smart agriculture program, including the establishment of Climate-Smart Villages, in the country.

Results: The following are recommendations for the promotion of CSA and establishment of CSVs in Myamar: - CSV platforms in the country should address issues of food security, nutrition and livelihood enhancement by addressing current needs/priorities, and building adaptive capacities of local communities and their local partner institutions to address future climate risks. - A CSA/CSV strategy should also have an inclusive development objective, with clearly defined pathways for reducing poverty amongst smallholder and tenant farmers. - CSVs that use a small-landscape approach including micro-watershed management provide special opportunities for enhancing the ecosystem services by restoring degraded landscapes, conserving soil and water resources, and managing residues. - Diversification and intensification are key elements in a CSA strategy aimed at reducing vulnerabilities and risks resulting from climate change/natural disasters. - Horticulture and homestead gardens are promising major new areas for leveraging nutrition contributions through CSA interventions in drylands and uplands of Myanmar. - Raising livestock is one of the more sustainable pathways for bringing households, including the landless (especially women) and marginalized landholders, out of poverty. - CSVs can provide valuable platform for conserving agro-biodiversity in schools with designated curator farmers, even as new varieties are tested and introduced. - Four agro-ecological zones in Myanmar (i.e. central dry zone, upland area, highland subzone of the upland and the delta region) were identified for exploration as potential sites of CSVs. - These CSVs should be considered as focal points for developing local adaptation interventions which recognize the context-specific nature of current/anticipated climate change. CSA strategies must also recognize the differences across zones and states. - Local stakeholders must actively engage in establishing CSVs. - An iterative socio-technical process in each CSV identified should be implemented. - Support is needed for a three-year program on CSVs in Myanmar.

Partners: International Institute of Rural Reconstruction (IIRR) Ministry of Agriculture and Irrigation (MOAI) Yezin Agricultural University

Links / Sources for further information: Rapid scoping study in Myanmar: https://www.dropbox.com/s/79stk4icema6ymi/REPORT_Scoping%20Study_Climate%20Smart%20Villages%20in%20Myanmar_FINAL.PDF?dl=0

Project highlight 267

Title: Developing Climate Informed Risks Maps for MRD's Rice and Rice-based Cropping System.

Author: CCAFS SEA	**Subject:** Climate Informed Risks Maps
Publisher: CCAFS	**Year reported:** 2016
Project highlights types: ● Participatory action research ● Policy engagement	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: Risk map, Mekong River Delta, Vietnam	**Countries:** Vietnam

Highlight description: In response to Ministry of Agriculture and Rural Development (MARD) call for technical support in identifying solutions for future agriculture production, CCAFS-SEA organized a joint field assessment of El Nino-affected provinces in MRD. Following assessment, CCAFS and MARD in consultation with the 13 MRD provinces developed climate-related risk maps for the Mekong River Delta (MRD) provinces. The maps indicate the areas prone to salinity or flooding during years of normal and severe salinity intrusion. The maps integrate the outputs of various research projects and information on salinity intrusion and flooding in the MRD to develop downscaled risk maps for the provinces. Representatives from the local government, international and national research organizations and universities contributed their local knowledge on the specific resources available in the provinces and the condition of the infrastructure. The risk maps have been completed and these will be further developed to provide guidance and information towards developing climate-adaptive cropping systems. Aside from identifying appropriate responses, the maps could help provinces compare cropping calendars, which is important in managing and sharing water resources among provinces.

Introduction / Objectives: Climate change and its impacts on smallholder farmers are big issues in Southeast Asia (SEA) which is largely dependent on agriculture. One impact of climate change that is receiving attention in SEA is salinity intrusion. In 2016, Vietnam is one of SEA countries which has had to deal with the effects of salinity intrusion and drought brought about by the El Niño Southern Oscillation (ENSO). To develop an adaptive rice production strategy and plan for the Mekong River

Delta, MARD and CCAFS have identified potentially affected areas, responsive rice-based systems and appropriate sowing/planting dates for the region.

Results: The participatory mapping of the vulnerable areas in the MRD was organized by the Department of Crop Production of MARD and CCAFS. More than 100 extension staff, managers, and policy makers from local and national agriculture offices participated in developing provincial risk maps and action plans for the 13 MRD provinces. The workshop used the outputs of various research projects and information on salinity intrusion and drought in the MRD to develop downscaled risk maps for the provinces. Such maps depend not only on the specific resources available in the provinces, but also on the condition of the infrastructure available. Representatives from the local government, international and national research organizations and universities therefore contributed their local knowledge on these factors. The maps indicate the areas prone to salinity during years of normal and severe salinity intrusion. Each color in the map shows a level of salinity intrusion (red for high levels, yellow for medium and green for low). Linked to the different colors are CSA options (e.g. aquaculture for red areas, adjustment of cropping calendars or use of saline- and drought-tolerant varieties in yellow areas), that extension workers can recommend to farmers. The risk maps have been completed and these will be further developed to provide guidance and information for developing climate-adaptive cropping systems. Aside from identifying appropriate responses, the maps could help provinces compare cropping calendars, which is important in managing and sharing water resources among provinces.

Partners: Departnemtn of Crop Production, MARD National center for hydro-meteorological forecasting, Vietnam Southern hydro-meteorological forecasting station

Links / Sources for further information: News from the field: Targeting salinity intrusion and drought in Vietnam: From assessments to on-the-ground initiatives (will be published on Agriculture for Development) Original file: https://www.dropbox.com/s/4lz2eshdyx70dee/Blog_Targeting%20salinity%20intrusion%20and%20drought%20in%20Vietnam%20From%20assessments%20to%20on%20the-ground%20initiatives_Cruz.pdf?dl=0

6. Activities

A262 - Integrating CCAFS work in national programs through the joint CSA activities with key national partners

Description: The focus will be developing and implementing joint activities with key government organizations in Vietnam, Laos, Cambodia, Philippines and Myanmar. CCAFS FP Projects and regional resources will be leveraged to generate investment in CSA scaling out in these countries. The joint activities will also enable integration of CCAFS focus themes in the national programs.

Start date: Jan 2015 **End date:** Dec 2017

Activity leader: CCAFS/CRP7 - CGIAR Research Program on Climate Change, Agriculture and Food Security Leocadio, Sebastian <l.sebastian@irri.org>
Status: On-going

Overall activity or progress made during this cycle: In Vietnam, CCAFS and MARD co-implemented the assessment of El Nino-affected regions and the development of climate-related risk maps and adaptive cropping systems for MRD provinces. In Myanmar, CCAFS has identified entry points for promoting CSA and the CSV approach. In Thailand, CCAFS has also worked with CGIAR Centers, international research partners (IIRR, IWMI, ICRAF, CABI, ICRISAT, IRRI) and Department of Agriculture of Thailand on developing concept notes for collaboration towards climate change adaptation, mitigation and resilience in Thailand.

Deliverables in this activity:

- D1106: Integrating CCAFS work in national programs through joint CSA activities with key national partners
- D2834: Integrating CCAFS work in national programs through joint CSA activities with key national partners
- D1124: Integrating CCAFS work in national programs through joint CSA activities with key national partners

A263 - Integrating CCAFS science in national CSA policies and development plans

Description: The activity will work with various national policy organization and develop joint activities that will help bring CCAFS science in national CSA policies and development agenda. The specific target countries for this activity are Myanmar, Laos, Cambodia and Vietnam.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: CCAFS/CRP7 - CGIAR Research Program on Climate Change, Agriculture and Food Security Leocadio, Sebastian <l.sebastian@irri.org>
Status: On-going

Overall activity or progress made during this cycle: CCAFS SEA worked with MARD in Vietnam on following activities: (1) refining INDC options and developing a priority plan for implementing agricultural NDCs; (2) contributing to the integration of Agriculture in National Adaptation Plans; (3) developing climate-related risk maps and adaptive cropping systems for provinces in the MRD; and (4) assessing El Nino-affected regions

Deliverables in this activity:

- D2442: Integrating CCAFS science in national CSA policies and development plans
- D1135: Integrating CCAFS science in national CSA policies and development plans

7. Leverages

No leverages added

Title: Upscaling Climate Smart Agriculture (CSA) Innovation in in SEA

1. Description

Start date	End date	Management liaison	Mgmt. liaison contact
Jan 2015	Dec 2017	RP SEA	Leocadio, Sebastian <l.sebastian@irri.org>

Funding source types	Status	Lead Organization	Project leader
W1/W2	Complete	IRRI - International Rice Research Institute - Philippines	Leocadio, Sebastian <l.sebastian@irri.org>

Project is working on

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

Region(s)
SEA: Southeast Asia

Project summary

The current CCAFS SEA portfolio already involves the implementation and assessment of various CSA practices in the different CSV. There are, however, areas that are not covered by the portfolio and emerging CSA innovations that provide future options in coping with climate change. The project engaged CG centers and non CG organizations in assessing and evaluating CSA practices and technologies in the areas of new innovative technologies and practices for farmers, decision support tools for policy makers, and innovative communication and extension approaches. This will provide options that can be integrated in the CSVs and for upscaling by national programs.

2. Partners

Partner #1 (Leader)

Institution: IRRI - International Rice Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Project Leader	Leocadio, Sebastian <l.sebastian@irri.org>	coordinate project activity	HQ

Partner #2

Institution: ICRISAT - International Crops Research Institute for the Semi-Arid Tropics

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Whitbread, Anthony <a.whitbread@cgiar.org>	Activity 2014-265 *Partner*.	Patancheru, India

Partner #3

Institution: BIOVERSITY - Bioversity International

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Molina, Agustin <A.molina@cgiar.org>	Activity 2014-265 *Partner*.	HQ

Partner #4

Institution: Institute for Agricultural Environment-Vietnam

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	VAN TRINH, MAI <maivantrinh@gmail.com>	Activity 2014-265 *Partner*.	HQ

Partner #5

Institution: WorldFish - WorldFish

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Van Tran, Nhuong <N.Tran@cgiar.org>	Activity 2014-265 *Partner*.	HQ
Partner	Kam , Suan Pheng <S.Kam@CGIAR.ORG>	Activity 2014-266 *Partner*.	HQ

Partner #6

Institution: ICRAF - World Agroforestry Centre

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Lasco, Rodel <r.lasco@cgiar.org>	Activity 2014-266 *Partner*.	Los Baños, Philippines

Partner #7

Institution: PhilRice - Philippine Rice Research Institute

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Manalo, Jaime <ja.manalo4@philrice.gov.ph>	Activity 2014-267 *Partner*.	HQ

Partner #8

Institution: CABI-United Kingdom

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Wai Hong, Loke <w.loke@cabi.org>	Activity 2014-267 *Partner*.	HQ

Partner #9

Institution: CCAFS/CRP7 - CGIAR Research Program on Climate Change, Agriculture and Food Security

Contact(s):

Type	Contact	Responsibilities and contributions	Branch
Partner	Joven, Berna <b.joven@irri.org>	Activity 2014-267 *Leader*.	HQ
Partner	Leocadio, Sebastian <l.sebastian@irri.org>	Activity 2014-265 *Leader*. Activity 2014-266 *Leader*.	HQ

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

Year	Lesson(s)
2016	A more synergized work modality and better project monitoring mechanisms with partners are necessary to ensure good quality of outputs.

Partnerships overall over the last reporting period:

Frequent contact and follow-ups with project partners enabled a smooth monitoring of their research progress and provision of support, as needed. Overall, the partners has been following the pre-defined work plan and delivering outputs on time.

3. Locations

This project is not global

Project level	Latitude	Longitude	Name
Country			Cambodia
Country			Lao PDR
Country			Myanmar (Burma)
Country			Philippines
Country			Vietnam

4. Outcomes

4.1 Project Outcomes

Project Outcome statement:
By 2019, National agricultural ministries (in the Philippines, Vietnam, Cambodia, Laos, and Myanmar) have bought into the concept of CSV's and have identified locally appropriate CSA technologies patterned after various CCAFS-SEA intervention. This means that these national ministries are investing financially and institutionally in expanding the scope of initial CCAFS-SEA funded and leveraged projects. These expansion programs are supported and implemented through broad based partnerships with farmer organisations and private business development suppliers at the sub-national level.

Annual progress towards outcome (end of 2016*): National ministries are co-implementing contracts, projects, and partnerships involving identified stakeholders in selected areas in 5 SEA countries. Implementation will be probably co-funding and partial staffing. Likewise, these ministries are capable of identifying appropriate CSV technological components at local level. CCAFS will support studies that look at constraints and new opportunities in such partnerships. Evaluation of preliminary end-user outcomes will also be done. Documentation and analysis will be done to see gaps and promising "autonomous" out and up scaling mechanisms.

Annual progress towards project outcome in the current reporting cycle (2016*): In 2016, the national ministries of focus SEA countries started adopting CCAFS-developed initiatives and disseminating CSA. In Vietnam, the Ministry of Agriculture and Rural Development (MARD) co-implemented a project to identify climate-adaptive cropping systems and an appropriate cropping calendar for rice in Mekong River Delta (MRD) through participatory approach. More than 100 extension staff, managers, and policy makers from local and national agriculture offices participated in developing provincial risk maps and action plans. Outputs of this activity will be used by MARD to develop a guide for rice production in MRD. In the Philippines, CCAFS, together the Philippine Federation of Rural Broadcasters (PFRB), broadcast materials on climate change and related agricultural issues, and promote CSA to farmers and the general public. A set of 156 ready-to-air interviews and 165 scripts in 5 local languages were prepared and distributed to 153 rural broadcasters. The campaign evaluation showed that these were aired over at least 63 radio stations nationwide, reaching about 2 million listeners(based on radiostation listenership). CCAFS also worked with PhilRice in the Infomediary campaign involving the youth where 225 teachers (since 2014) were trained and 75 schools have integrated the CSA modules in their curriculum. The campaign directly involved about 9000 students and reached indirectly(through various school activities) 200,000 students nationwide. The Department of Education has recommended the inclusion of CSA competencies in the crop production curriculum among participating schools. In Lao PDR, CCAFS participated in the MAF-CGIAR Coordination Meeting organized by the Ministry of Agriculture and Forestry (MAF) on May 2016. In the meeting, strategic local partners and opportunities for improving partnership and programs up to 2025 were identified. Besides influencing the ministry level, CCAFS SEA also worked with various international and national research organizations in promoting the adoption and scaling-up of CSA practices and technologies in the region.

How communication and engagement activities have contributed to achieving your Project outcomes:* Constant communication with partners is a key factor to the success of this project. CCAFS

initiatives have been widely spread through local and international media channels as well as in scientific workshops and meetings. Annual project review was conducted to share results and experiences. We touch base with local governments and policy makers in the focus countries to find more opportunities for integration of CCAFS initiatives in the national/sub-national development strategies and plans. We always aim to strengthen collaboration with government agencies and engage their staff in CCAFS activities.

Evidence documents of progress towards outcomes:*

https://marlo.cgiar.org/data/ccafs/projects//115/projectOutcome/P115_Evidence%20of%20progress%20towards%20outcomes.docx

Annual progress towards outcome (end of 2015): By the end of 2015, project intervention have identified and tested promising CSA technologies and have organised communities into CSVs. These technologies are either those not covered in other CCAFS projects or those that are developed in parallel CCAFS projects. National ministries are also slowly being engaged through workshops and co-development of national or sub-national project proposals. Potential private business development partners, preferably those with national coverage are also being identified. The first year is purely devoted to engagement period and ground working, thus, no visible outcomes will be forthcoming.

Annual progress towards outcome (end of 2017): Capacity within the National agricultural ministries to expand the coverage of public-private partnerships patterned from works in the previous years have been strengthened. They have a depository of appropriate CSA technologies and also have pinned down the institutional needs at the expansion sites. During the year, CCAFS-SEA starts to co-develope with national ministries and programs that would formalise lasting partnerships between them and various farmer organisations, private agricultural businesses. Again, these partnerships are built around sustaining appropriate CSAs and CSVs

Annual progress towards outcome (end of 2018): By end of 2018, national agricultural ministries have fully invested and are prioritising the national program that was developed in the previous year with CCAFS support.

lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them:* Not only did we invest in terms of technical and logistic support but more importantly, we tried to pay attention to building our social capital among national ministries, governments, and partners. This we did by strengthening collaborative relationships and being mindful of our partners' needs and how we can contribute to that need. Our communication strategies and participatory action research also contributed to drawing in stakeholders to engage, cooperate, and adoption of CCAFS initiatives towards the achievement of our target regional outcomes.

4.2 CCAFS Outcomes

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

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

2019
Target value: 5 **Cumulative target to date:** 10 **Target narrative:** Strengthening and expanding 5 broad partnerships earlier established in each of the targeted countries. Broad partnerships implies a National ministries as the lead, and they have working relationships with various private stakeholders which includes farmer organisations and private business development suppliers that are involved in implementing CSA technologies and supporting CSVs. THese partnerships have sub-national coverages. **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

2015
Target value: 0 **Cumulative target to date:** 0 **Target narrative:** During this year, only testing of technologies and dialogue with potential private sector partners will be done. Farmer organisations will also be formed around CSA practices. **The expected annual gender and social inclusion contribution to this CCAFS outcome:** <Not Defined>

2016
Target value: 5 **Cumulative target to date:** 5 **Target achieved:** 5.0 **Target narrative:** Broad partnerships (one each in the Philippines, Cambodia, Vietnam, Laos, and Myanmar) implies a National ministries as the lead, and they have working relationships with various private stakeholders which includes farmer organisations and private business development suppliers that are involved in implementing CSA technologies and supporting CSVs. These are initial efforts, thus, with limited geographical scope. Lessons from this initial efforts will be used for wider sub-national efforts in the later years of the project. **Narrative for your achieved targets, including evidence:** PFRB through their radio programs and the PhilRice through the Infomediary campaign promoted CSA . In Laos, NAFRI and IRRI are co-developing a proposal integrating climate information and advisory service in an ICT platform developed by CCAFS. Thailand's Department of Agriculture collaborated with CCAFS in developing concept notes for the integration of CSA T&P, agro-climate advisories, and drought adaptation in their work plan. In Myanmar, CCAFS started working with MOALI on a possible GCF project and conducted a round table discussion and a rapid scoping study to explore entry points for promoting CSA and CSV approach in collaboration. **Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome:** Not applicable **The expected annual gender and social inclusion contribution to this CCAFS outcome:** not applicable

Major Output groups:

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

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways:
This project will contribute to FP3 through the upscaling of proven low-emission agriculture measures. It can also contribute to FP4 through initiatives that will scale the delivery mechanisms of weather information.

Collaborating with other CRPs

<This project does not have a CRP selected yet.>

4.4 Case Studies

No case studies added

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

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

Brief bullet points of your expected annual 2019 contribution towards the selected MOG: Yearly assessing new innovation on climate smart technologies and practices Yearly developing decisions support systems for implementing CSA in national programs

Brief`2019 plan of the gender and social inclusion dimension of the expected annual output: Participation in the testing and evaluation of the technologies will involve women and other sectors of the agrarian communities. Women organization will also be set-up and their role in promoting and broadening the use of CSA technologies will also be explored through participatory research methodologies.

Major Output groups - 2016

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

Brief bullet points of your expected annual 2016 contribution towards the selected MOG: Yearly assessing new innovation on climate smart technologies and practices Yearly developing decisions support systems for implementing CSA in national programs

Brief summary of your actual 2016 contribution towards the selected MOG: In 2016, we collaborated with various international and national research organizations, such as CABI, ICRISAT, OML, NOMAFSI, PFRB, PhilRice, IIRR, and VIPEP, to assess and promote new CSA technologies and practices for climate change adaptation, mitigation, and resilience in five countries: Vietnam, Laos, Cambodia, Philippines, and Myanmar.

Brief`2016 plan of the gender and social inclusion dimension of the expected annual output: Participation in the testing and evaluation of the technologies will involve women and other sectors of the agrarian communities. Women organization will also be set-up and their role in promoting and broadening the use of CSA technologies will also be explored through participatory research methodologies.

Summary of the gender and social inclusion dimension of the 2016 outputs: The participation of women and youth in trainings and CSA demonstrations was strictly considered in Infomediary in the Philippines. A study was also conducted on gender-based vulnerabilities and adaptation to climate change, and constraints to accessing resources was conducted in Tra Hat CSV, Bac Lieu province, Vietnam

Major Output groups - 2015

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

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

Brief summary of your actual 2015 contribution towards the selected MOG: Innovative techniques and methods have been tested/developed in SEA countries under the partnership with international and national organizations. Some activities have been completed with data and reports available. Some others are partly done or extended. Two decision support tools are being revised.

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

Summary of the gender and social inclusion dimension of the 2015 outputs: Gender balance was strictly considered in component of research team and participated farmers in any activity. Gender-vulnerable differences were explicitly included in questionnaire and collected data.

Major Output groups - 2014

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

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

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

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

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

5.2 Deliverables

No deliverables added

5.3 Project Highlights

Project highlight 187

Title: Gender-based vulnerabilities and adaptation to climate change the case of climate smart village in Tra Hat Hamlet, Bac Lieu province, Vietnam

Vulnerabilities and Adaptation to a Changing Climate: A Gender Analysis Conducted in Tra Hat Hamlet, Bac Lieu Province, Vietnam

Srijita Dasgupta
MSc. Climate Change
Academic Supervisor: Thilde Bech Bruun

Author: Srijipta Dasgupta, Thilde Bech Bruun, Thelma R. Paris and Truong Thi Ngoc Chi	**Subject:** Gender-based vulnerabilities and adaptation to climate change the case of climate smart village in Tra Hat Hamlet, Bac Lieu province, Vietnam
Publisher: CCAFS	**Year reported:** 2016
Project highlights types: ● Gender and social inclusion	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: Gender-based vulnerability, Mekong River Delta, Climate change, CSV	**Countries:** Vietnam

Highlight description: Gender-related problems are pervasive and manifested at higher levels of intensities in many developing countries. This study was undertaken in the Tra Hat Climate-Smart Village (CSV), Bac Lieu Province in the Mekong Delta. Framing the research from a vulnerability point of view, the researchers looked at the current livelihood activities of male- and female-headed households, and the gendered adaptation (or coping) strategies to a changing climate as

implemented by individual households. Based on this, gender-based constraints to accessing resources were also determined. Adaptation strategies, in general, reflect the capacities individuals, institutions, or societies can deploy to adjust to changes that affect how they function, use resources and derive livelihoods

Introduction / Objectives: Gender is an important determinant of the adaptation strategies that farmers implement when anticipating different future crises and when faced unpredictable weather patterns. Women (and girls) are often among the most underprivileged and vulnerable because of their limited rights to access land and other resources, hindering their adaptation. The study aimed to analyze the climate risks that men and women face and how they are adapting to it. The study also identified different gender-based livelihood activities in a rice-based agriculture system, and whether gender differences exist in accessing resources for improving food security and adapting under projected climate stresses

Results: The village has experienced increased temperature and extreme weather events like droughts and floods, reduced and sporadic rainfall. Decreasing rice yield, especially after unprecedented weather events, was the most common concern among farmers. Farmers were also highly vulnerable to rice price shocks and low prices offered by the middlemen and/or brokers. Farmers focused more on day-to-day survival and were not able to identify long term adaptation strategies. However, several coping strategies were implemented either while anticipating or after facing risks. Agricultural strategies (e.g. changing crop varieties, land leveling, increased inputs etc.) for increasing rice yields differed little between male- and female-headed households. More female-headed households borrowed money to cope with crisis while more male-headed households had savings for the future and asset accumulation/disposal. The main decision-makers for agricultural coping strategies were the male members of the family while their wives or main female members managed the household coping strategies. Female heads (compared to wives of male heads) generally had more labour hours as the de facto managers of and participants in both household and agricultural activities. Majority of the female farmers were interested in livestock rearing technologies and alternative income-generating activities. Male farmers wanted to be trained in rice, livestock and pest management technologies. Despite the strong assertiveness of Vietnamese women and many favourable gender policies, women are still vulnerable due to limited access to resources (e.g. land ownership certificates, trainings, income earning activities and information). Women's financial mobility is restricted due to their inherited role of managing households. Therefore, they need more knowledge and opportunities of localized income earning activities to acquire voice and authority in the decision-making processes. Visions in gender mainstreaming, especially increasing the adaptive capacities, involvement and participation of women, need to be strengthened to ensure the success and continuity of current and future project interventions.

Partners: University of Copenhagen, Denmark

Links / Sources for further information: MSc thesis on Vulnerabilities and Adaptation to a Changing Climate: A Gender Analysis Conducted in Tra Hat Hamlet, Bac Lieu Province, Vietnam: https://www.dropbox.com/s/4l8r0ox0zj7pq2j/Gender%20thesis_Srijita.pdf?dl=0

Project highlight 265

Title: Evaluating the opportunities for intensifying dry season fallows in rice based systems with climate smart dryland crops in Southeast Asia: A regional analysis

Author: Anthony Whitbread and Murali Krishna Gumma	**Subject:** Evaluating the opportunities for intensifying dry season fallows in rice based systems with climate smart dryland crops in Southeast Asia
Publisher: CCAFS	**Year reported:** 2016
Project highlights types: ● Participatory action research ● Food security	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: Rice-based system, dry-land crop, remote sensing, climate change	**Countries:** Myanmar (Burma)

Highlight description: Myanmar's agriculture depends highly on monsoon rains. The country's Central Dry Zone (CDZ) area receives the lowest rainfall and is frequently affected by drought events. A study led by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), sought to understand and identify a range of promising rice-fallow intensification options to enhance agricultural productivity particularly in the regions of Magway, Pakokku, and Monwya in CDZ. The study has devised an approach using remote sensing and geographical information system (GIS) tools, to map areas with potential for intensifying the rice fallow phase. This type of accurate classification with its finer details and their spatial location can help target farmers with appropriate technologies

Introduction / Objectives: The study makes use of historical weather records, seasonal climate forecasts (SCF) and crop scenario analyses with crop-soil models to find more optimal farm management decisions. The SCF builds on the 40-year period historical weather data obtained from the Department of Meteorology and Hydrology. Major objectives are: - Identify and prepare spatial distribution maps of major crop areas for intensification including rice fallows using RS & GIS. - Explore sustainable crop intensifications options to cope with seasonal rainfall variability to minimize risks and enhance productivity. - Participatory evaluation of farmers' preferred legumes and cereals in rice fallows and dryland sequences.

Results: MODIS re-projection tool (MRT) was used to re-project and mosaic twelve tiles of study area and then stack them as a single composite. Altogether 4 images were stacked for the crop year 2013 and 2015. The NDVI data was further processed to create monthly maximum value composites for each of the seven months in the Kharif season. Ground survey information was collected during different seasons for two distinct purposes: 1. mapping land use/land cover including irrigation source; and 2. Estimate the cropping intensity and crop extent. For the classification and ideal spectra generation, 263 field survey points were used, and 828 points were used for accuracy assessment. Cropland areas were mapped at resolutions of 250m and 30m. Land use/land cover class identification and labeling were based on MODIS NDVI time-series plots, Landsat8 imagery, ideal spectra, ground reference data, and very high resolution images from the Google Earth application. The comparison clearly shows the difference in the resolution of classes and the detail which higher resolution imagery produces. This type of accurate classification with its finer details and their spatial locations can help us target farmers with appropriate technologies. Higher resolution classification helped extract croplands and non-croplands very accurately, which was not classified in course resolution imagery.

Partners: ICRISAT

Links / Sources for further information: Blog: Climate-smart crops for Myanmar's dry regions: https://ccafs.cgiar.org/news/climate-smart-crops-myanmar%E2%80%99s-dry-regions#.WKbjG4VOKUs

Project highlight 268

Title: Infomediaries as complementary knowledge channels of climate-smart agriculture in the Philippines

Author: Jaime A. Manalo IV, Jayson C. Berto, Fredierick M. Saludez, Jennifer D. Villaflor, Rommel T. Hallares, and Teofilo C. Paulino	**Subject:** Infomediary campaign
Publisher: CCAFS SEA	**Year reported:** 2016
Project highlights types: ● Gender and social inclusion ● Successful communications	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: Infomediary campaign, CSA, Philippines, Youth	**Countries:** Philippines

Highlight description: This project took off from the need to intensify efforts to disseminate information on climate-smart rice agriculture (CSRA) in remote rice-farming communities. It mobilized high school students as CSRA information providers in rice-farming communities. The campaign directly involved about 9000 students and reached indirectly 225,000 students nationwide (through school activities). In 2016, 113 high school teachers and 5 instructors from state universities and colleges in the Philippines were trained on climate-smart rice agriculture. Resource persons from the Climate Change Commission were engaged during the training programs. Based on the random call rounds, 59 teachers reported integrating the CSRA lessons in their curriculum. Many of these teachers also conducted community outreach activities such as technology seminars for the farmers in their community. Students asking information on rice varieties, seed availability, and climate change in general sent 2,144 SMSs to the PhilRice Text Center (PTC) for 2016. The researchers also analyzed 1,023 SMSs sent by participating high school students to the PhilRice Text Center in 2015 and matched them with the SMSs sent by the farmers. Students and farmers had similar points of interests regarding varieties, integrated pest management, and general information on rice. Students had also sent the most number of messages during the peak of El Niño and a typhoon occurrence in 2015, implying that the students provided information at the right time. An impact assessment in one of our participating schools in Occidental Mindoro concluded that high school students serving as infomediaries on CSRA is “highly evident”. The study also reported the technologies and/or strategies adopted by farmers out of the infomediation that transpired. Key policy/decision makers in DepEd

were also involved. This project was presented during the National Summit of DepEd in support of the K-12 program, in which 249 school principals participated.

Introduction / Objectives: The intensification of information dissemination on climate-smart rice agriculture (CSRA) in remote rice-farming communities is needed, thus this project sought to mobilize high school students as CSRA information providers in rice-farming communities. The project objectives are: (1) to fine-tune the infomediary model as an innovative knowledge-sharing scheme for CSRA in rice-farming communities; (2) to further explain the changes in knowledge, attitudes, and practices of farmers towards climate-smart agriculture through documentation of the infomediation process; and (3) to develop strategies for tapping agricultural technical-vocational high schools as complementary extension hubs for the conventional agricultural extension in marginalized and information-poor areas.

Results: The project is implemented in 208 high schools, involving 9000 students directly and 225,000 indirectly nationwide. Teachers were trained on climate-smart rice agriculture (CSRA), and in turn trained high school students to serve as information providers (infomediaries) in their rice-farming communities. In 2016, 113 high school teachers and five instructors from state universities and colleges were trained on CSRA. Resource persons from the Climate Change Commission were engaged during the training programs. Teachers also engaged farmers in their respective areas through various activities, such as technology seminars and field days. During the random call rounds, 59 teachers reported they have successfully integrated CSRA lessons in their curriculum. In 2016, students sent 2,144 SMSs to the PhilRice Text Center (PTC), asking information on rice varieties, seed availability and climate change. The researchers also analyzed 1,023 SMSs sent by participating high school students to the PTC in 2015 and matched them with SMSs sent by farmers. Students and farmers had similar interests in varieties, integrated pest management, and general information on rice. Students had also sent the most number of messages during the peak of El Niño and a typhoon occurrence in 2015, implying that they provided information at the right time. An impact assessment in one of our participating schools in Occidental Mindoro concluded that high school students serving as infomediaries on CSRA is “highly evident”. The study also reported the technologies and/or strategies adopted by farmers out of the infomediation that transpired. The team also conducted cost comparisons on accessing information on CSRA and found that infomediation options were 37.5% cheaper than others. Key policy/decision makers in DepEd were also involved. This project was presented during the National Summit of DepEd in support of the K-12 program, in which 249 school principals participated.

Partners: This Project was a collaboration among PhilRice, Department of Education, CGIAR CCAFS, Climate Change Commission, and participating state universities and colleges (Central Luzon State University, Mariano Marcos State University, Aurora State College of Agriculture and Technology).

Links / Sources for further information: Main website www.infomediary4d.com Journal articles Manalo, J.A., Balmeo, K.P., Berto, J.C. et al. SpringerPlus (2016) 5: 1592. doi:10.1186/s40064-016-3238-6 http://link.springer.com/article/10.1186/s40064-016-3238-6 Jaime IV, A. M. (2016). Climate-smart Agriculture: Do Young People Care?. Asian Journal of Agriculture and Development, 13(1), 59-76. http://searca.org/ajad/read-articles/13-view-article?aid=591 Blogs The Infomediary Campaign: Reinventing instruction approaches to win young people’s minds (B.Joven) https://ccafs.cgiar.org/blog/infomediary-campaign-reinventing-instruction-approaches-win-young-people%E2%80%99s-minds#.WKmbd5dW7IU More than reciting a pledge (A. Bautista) http://www.infomediary4d.com/infomediary-campaign/more-than-reciting-a-pledge/ Helping hands

behind Claveria Rural Vocational School infomediaries (A. Bautista) http://www.infomediary4d.com/infomediary-campaign/helping-hands-behind-claveria-rural-vocational-school-crvs-infomediaries/ Farming communities learn about climate-smart agriculture for rice through students (A.Cruz) https://ccafs.cgiar.org/blog/farming-communities-learn-about-climate-smart-agriculture-rice-through-students#.WKmcsJdW7IU News stories https://theilocostimes.blogspot.com/2016/05/k-to-12-teachers-train-on-climate-smart.html http://www.businessmirror.com.ph/government-wants-students-to-learn-climate-smart-agriculture/

Project highlight 269

Title: A Pilot Radio Campaign Mobilizing the Rural Sector for Climate Change Adaptation and Mitigation in the Philippines

Author: Louie Tabing, Rex Navarro, and Cherrie Lyn V. Masicat	**Subject:**
Publisher: CCAFS	**Year reported:** 2016
Project highlights types: ● Successful communications ● Capacity enhancement ● Policy engagement	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: Radio campaign, CSA, Philippines	**Countries:** Philippines

Highlight description: Cognizant of the potent role of rural radio in raising awareness and mobilizing people toward climate change adaptation and mitigation, CCAFS SEA engaged the services of the Philippine Federation of Rural Broadcasters (PFRB) in piloting a radio campaign "Climate Change: Broadcast It". The PFRB conducted three seminar workshops in the strategic regions in the Philippines to familiarize rural broadcasters with the climate change issues and CSA practices, which could help rural communities adapt to and mitigate climate change. Furthermore, 156 ready-to-air audio expert interviews and 165 radio scripts in 5 local dialects. These were distributed to 153 PFRB members and other community radio practitioners. Computing the scope of listenership of the radio stations that participated in the campaign fully, at least 2,000,000 listeners have been reached through the campaign.

Introduction / Objectives: The Campaign aimed to familiarize rural broadcasters with climate change, agriculture and food security issues so that they may be better capacitated to broadcast such issues to rural communities in the Philippines. Specifically, the workshops aimed to: 1) enable the participants to appreciate and understand climate change, its manifestations, and some science innovations for its mitigation and adaptation in the context of agriculture and food security; 2) Produce prototype broadcast materials on climate change and CSA; and 3) map out a work plan on broadcasting climate change, agriculture and food security in their respective provinces.

Results: Through the campaign, 156 ready-to-air audio expert interviews and 165 radio scripts were produced in 5 local dialects, exceeding the targets of 108 interviews and 144 scripts, respectively. These were distributed to 153 PFRB members and other community radio practitioners. The broadcast

materials worked around the basic concept of climate change, CSA T&Ps in rice farming, and other related scientific areas. After the campaign, a simple study to assess the utilization of the materials and the users' acceptance of the information was conducted, although getting feedback from participating members proved to be a challenge. Sixty-three PFRB members aired the expert interviews and read the scripts on-air. Of the 63, 18 conducted follow up discussions, six committed to continue beyond the campaign duration, three conducted further interviews with local experts, and one will re-run the series. In terms of audience feedback, most were appreciative of the new knowledge gained. Computing the scope of listenership of the radio stations that participated in the campaign fully, at least 2,000,000 listeners have been reached through the campaign. As a form of incentive, the 60 participating broadcasters were given certificates and 12 were given plaques. Three broadcasters were awarded with a major prize, which included a trip to Vietnam where they will get to visit Ma CSV in Hanoi. Interaction with Vietnamese media will be carried out so the broadcasters can share their experiences and best practices in climate change reporting.

Partners: Department of Agriculture Regional Offices, Philippine Agricultural Journalists, Philippine Science Journalists, Cagayan State University, and the participating rural broadcasters who are members of the PFRB.

Links / Sources for further information: CCAFS Working Paper: Climate change reporting for rural broadcasters Engaging rural media for community mobilization on climate-smart agriculture in the Philippines Radio scripts produced: • https://drive.google.com/folderview?id=0B5WDk4vUwyZTnY4V04wVnA1VTA&usp=sharing) • https://drive.google.com/folderview?id=0B5WDk-4vUwyZN2hMM1BSTW1CNjA&usp=sharing Blog: Rural folks to hear more climate-smart agriculture options 'on-air': https://ccafs.cgiar.org/news/rural-folks-hear-more-climate-smart-agriculture-options-%E2%80%98-air%E2%80%99#.WKafOG9950w Activity Photos: Workshop in Luzon: https://www.facebook.com/ruralbroadcasters.pfrb/media_set?set=a.518791438289858.100004770187092&type=3 Workshop in South Cotabato: https://www.facebook.com/ruralbroadcasters.pfrb/media_set?set=a.537982959704039.1073741838.100004770187092&type=3 Workshop in Visayas: https://www.facebook.com/ruralbroadcasters.pfrb/media_set?set=a.700325263469807.1073741842.100004770187092&type=3&pnref=story

Project highlight 270

Title: Climate-smart aquaculture: Evidences and potentials for northern coastal area of Vietnam

Author: Trinh Quang Tu, Tran Nhuong, Cao Le Quyen	**Subject:** Climate-smart aquaculture
Publisher:	**Year reported:** 2016
Project highlights types: ● Participatory action research ● Breakthrough science ● Food security	**Is global:** No
Start date: Jan 2016	**End date:** Dec 2016
Keywords: Climate-smart aquaculture, Vietnam, product diversification	**Countries:** Vietnam

Highlight description: Coastal aquaculture, particularly brackish water shrimp farming, plays an important role in the socio-economic development of most coastal communities on the North Central Coast (NCC) of Vietnam. However, coastal aquaculture in the region is among the activities most affected by increasing global climate change, which threatens the sustainable development of the fisheries sector, and the food security of the country. Within the action plan framework for adaptation and mitigation for climate change in the Ministry of Agriculture and Rural Development and the CCAFS, climate-smart aquaculture (CSAq) trials have been conducted in Hoang Phong commune, Thanh Hoa province in 2015 by WorldFish, the Vietnam Institute of Economics and Planning and Thanh Hoa Agriculture Extension Center (TEC). In the farm-level CSAq trials, tilapia was raised in rotation with tiger shrimp, mud-crab, and seaweed in a traditional extensive aquaculture system. Initial results show that the aqua-smart practice under the CSA approach is a “triple win” for local aquaculture farmers through: (1) sustainably improving aquaculture productivity and farming efficiency of the current production system; (2) increasing adaptive capacity and resilience of coastal aquaculture to climate change; and (3) contributing to climate change mitigation. The trial started with 5 households and has now spread to other communes involving 103 households. However, a number of constraints, such as lack of high quality fish seed and feeds, low market uptake for tilapia, and uncertainty from extreme climate events, should be considered in scaling out the aqua-smart practice throughout the region

Introduction / Objectives: Climate change is largely hampering the global food production systems, including aquaculture. The NCC is among the poorest regions in Vietnam, where coastal aquaculture, dominated by extensive integrated farming systems, is one of the few livelihood options for poor coastal communities. In recent years, aquaculture in the region has experienced an increase in disease outbreaks and crop failures exacerbated by climate change. The project "Enhancing community resilience to climate change by promoting smart aquaculture management practices along the coastal areas of North Central Vietnam " was designed to further support coastal aquaculture communities in coping with climate change

Results: The results from trials in Hoang Phong commune in Thanh Hoa province show that incorporating tilapia is a good climate change adaptation strategy as it contributes significantly to all three CSA objectives. Stocking tilapia resulted in higher productivity and production efficiency, leading to a significant increase in household income by 14.23-42.86%. A diverse aquaculture products like tiger shrimp, mud-crab, and seaweed also increase the resilience of the system when faced with changing prices or crop failure due to climate change and disease outbreaks. By utilizing natural feed sources and excessive nutrients in the farming ponds, the use of pellet feed for tilapia is reduced, resulting in lower GHGs emissions. CSAq promotion and scaling-up, however, requires supporting policies and institutions. A key factor that drives the adoption of tilapia integration into coastal aquaculture systems in the NCC is market uptake. Higher rate of adoption would mean larger production of tilapia. Therefore, support in market expansion, especially the export market, will encourage the up-scaling of the integrated coastal aquaculture practice throughout the region. Other issues such as low quality fingerlings and high feed costs are also barriers to scaling up the CSAq practice. Building the linkage between feed and seed suppliers and farmers' groups should be an appropriate solution. Recently, the scaling-out of CSAq practices for coastal aquaculture development in the NCC has been selected by MONRE as one of the national projects of the National Scientific and Technological Research Programs (NSP) 2016-2020. By including this CSAq initiatives in the NSP, MONRE and MARD expect that, after three years (2017-2019), the CSAq in coastal aquaculture development will be mainstreamed in aquaculture development policies of the fisheries sector by 2020.

Partners: WorldFish center (WF) Viet Nam Institute of Fisheries Economics and Planning (VIFEP)

Links / Sources for further information: Working paper: Climate-smart aquaculture: Evidences and potentials for northern coastal area of Vietnam:
https://cgspace.cgiar.org/rest/bitstreams/78305/retrieve

6. Activities

A265 - Assessing new innovation on climate smart technologies and practices

Description: This activity aims to assess the potential innovations on pest smart management, climate-smart system for dry land crops, and climate-smart aquaculture. These CSA options will be assessed in specific landscapes of SEA countries, complementing the options included in the different Flagship projects or promoted for up-scaling in target countries.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: CCAFS/CRP7 - CGIAR Research Program on Climate Change, Agriculture and Food Security Leocadio, Sebastian <l.sebastian@irri.org>
Status: On-going

Overall activity or progress made during this cycle: For the climate-smart pest management, CABI focused on addressing biotic challenges in the CSVs and reducing the carbon footprint of agriculture. Farmers' adaptive capacities were strengthened and an innovative framework of advisory services established in Laos, Cambodia, and Vietnam. ICRISAT identified the spatial distribution of major crop areas and explored sustainable agricultural options for dryland areas in Myanmar through satellite imagery and ground survey. In Vietnam, NOMAFSI demonstrated the sustainable intensification for rice, focusing on four components. This was showcased to farmers, village leaders, local authorities, and partners through a field visit. VIFEP worked on scaling out of the climate-smart aquaculture practice in the central coast of Vietnam. From the trials established in 2015 among 5 households, 103 households in 10 surrounding communes in Thanh Hoa province are replicating the practice. Evidence of success was documented and selected by MONRE as one of the national projects of NSP for 2016-2020.

Deliverables in this activity:

- D1217: Yearly assessing new innovation on climate smart technologies and practices
- D1218: Yearly assessing new innovation on climate smart technologies and practices

A266 - Developing decisions support systems for implementing CSA in national programs

Description: This activity focuses on developing aquaculture from spatial perspectives for the Mekong River Delta of Vietnam in support of policy and planning for climate change adaptation. The effects of climate and other change drivers on the potential and suitability of aquaculture production systems in the MRD are examined. Plausible aquaculture production systems for the future in the MRD are determined and mapped-out taking into consideration the changing bio-physical and socio-economic conditions.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: CCAFS/CRP7 - CGIAR Research Program on Climate Change, Agriculture and Food Security Leocadio, Sebastian <l.sebastian@irri.org>
Status: On-going

Overall activity or progress made during this cycle: The activity on future aquaculture of the Mekong River Delta was terminated due to the budget cut early last year. For the assessment of the impact of sea-level rise on food security, the OML Center continued to develop storm surge model and simulation scenarios. They also conducted fieldwork activities and gathered secondary data in order to assess the vulnerability of the agricultural sector vis-à-vis the models and scenario. A vulnerability map of hazard-sensitive areas was developed. These results will be shared with local government planners and development workers for better perception of potential risks under the impacts of climate change

Deliverables in this activity:

- D1219: Yealy developing decisions support systems for implementing CSA in national programs
- D1220: Yearly developing decisions support systems for implementing CSA in national programs

A267 - Evaluating innovative climate change communication and extension engagement approaches

Description: The activity will test the efficacy of using innovative communication and extension approaches such as radio and Infomediary campaigns. The radio campaign 'Climate Change i-Broadkas Mo' was piloted by the Philippine Federation of Rural Broadcasters (PFRB) in strategic regions of the Philippines. The radio campaign provided broadcasters with scripts and ready-to-air interviews on CSA. Each script was written in an easy-to-read, easy-to-understand manner. Infomediary focused on fine-tuning the knowledge sharing model based developed by the campaign, which mobilized the youth (secondary students) in changing farmers' behavior to improve rice farming practices. In the Infomediary, the improved farming practices learned from the teachers were passed on by the students to their parents and other farmers in the community. This model aims to help enhance the adaptive capacity of rice farmers to climate change.

Start date: Jan 2015 **End date:** Dec 2018

Activity leader: CCAFS/CRP7 - CGIAR Research Program on Climate Change, Agriculture and Food Security Joven, Berna <b.joven@irri.org>
Status: On-going

Overall activity or progress made during this cycle: The Philippine Federation of Rural Broadcasters (PFRB) mobilized a nationwide campaign to promote CSA to farmers and the public to gain awareness on climate change-related issues. A set of 54 interviews and 54 scripts in local languages were prepared and distributed to 153 rural broadcasters. These were aired in at least 63 radio stations nationwide, reaching about 2 million listeners. The campaign evaluation shows that the campaign reached some level of success. The Infomediary campaign, implemented by PhilRice, also shows remarkable outcomes. The CSA modules have been integrated in the curriculum of 81 participating secondary schools. This initiative was recommended to be applied in the Senior High School Program, which consists of 250 schools. A number of journal articles and blogs about the campaign have been published.

Deliverables in this activity:

- D1222: Yearly evaluating innovative climate change communication and extension engagement approaches
- D1223: Yearly evaluating innovative climate change communication and extension engagement approaches

7. Leverages

No leverages added