

CCAFS CORE W1_W2 ONLY

Title: (BRIDGING- SA- CIMMYT) Understanding and evaluating wheat response to climate change in time and space and generating comprehensive breeding strategies

Start date (dd-MM-yyyy)	01-01-2015	End date (dd-MM-yyyy)	31-12-2016
Management liaison	F1 - Flagship 1	Mgmt. liaison contact	Bonilla, Osana <o.bonilla@cgiar.org>
Lead organization	CIMMYT - International Maize and Wheat Improvement Center - India	Project leader	Alderman, Phil <p.alderman@cgiar.org>
Project type	CCAFS CORE	Detailed project workplan	<Not defined>

Project is working on

Flaship(s)	Region(s)
FP1: Climate-smart practices	RP SAs: South Asia

Bilateral project(s) contributing to this project

This project does not have Bilateral projects

Summary

The first main objective of this activity is to identify the key stress adaptive traits, and combinations of traits, that will be needed to maintain productive wheat crops in warmer regions now and in the future climate scenarios.

This will be achieved through analysis and modeling of detailed wheat trial data from heat stressed experimental environments.

The second main objective is to develop phenotyping platforms with NARS collaborators so that they can breed for probable climates.

While climate models can establish the broad meteorological parameters of future environments, the outputs from crop models will determine which aspects of growth will be most affected. This kind of information can help define the key characteristics of analogue sites since any given analogue site is only an approximation of a range of target environments.

Submission: <pending>

2. Partners

Partner #1 (Leader)

Institution: CIMMYT - International Maize and Wheat Improvement Center

Contacts

Type	Contact	Responsibilities and contributions
Project Leader	Alderman, Phil <p.alderman@cgiar.org>	Activity 2014-398 *Leader*. Activity 2014-399 *Leader*.
Project Coordinator	Carrillo Moreno, Eloisa <e.carrillo@cgiar.org>	Project coordination

Partner #2

Institution: CSIRO - Commonwealth Scientific and Industrial Research Organisation

CCAFS Partner(s) allocating budget: <Not defined>

Contacts

Type	Contact	Responsibilities and contributions
Partner	Chapman, Scott <scott.chapman@csiro.au>	Activity 2014-398 *Partner*. Activity 2014-399 *Partner*. Scott Chapman will provide expertise in environment characterization using crop simulation models. Scott Chapman will facilitate interactions between CIMMYT scientists and the core APSIM model development team.

Partner #3

Institution: UF - University of Florida

CCAFS Partner(s) allocating budget: <Not defined>

Contacts

Type	Contact	Responsibilities and contributions
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Submission: <pending>

Partner	Asseng, Senthold <sasseng@ufl.edu>	<p>Activity 2014-398 *Partner*. Activity 2014-399 *Partner*.</p> <p>Senthold Asseng will provide expertise in impact assessment and facilitate interactions with the broader wheat modeling community through his role as the primary coordinator of the AgMIP-wheat modeling team.</p> <p>Senthold Asseng will facilitate interactions between CIMMYT scientists and the core DSSAT-CSM model development team.</p>
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Partnerships overall performance over the last reporting period: <Not defined>

Lessons regarding your partnerships and possible implications for the coming reporting cycle: <Not defined>

Submission: <pending>

3. Locations

Project level	Latitude	Longitude	Name
Country	Not applicable	Not applicable	Pakistan

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

The prevailing wheat crop models currently in use by NARS researchers in South Asia (DSSAT and APSIM wheat models) have not been rigorously tested for response to high temperature. Results of a recent comparison of wheat models under the auspices of the Agricultural Model Intercomparison and Improvement Project showed significant divergence in model responses to high temperature. Recent CCAFS-funded work within CIMMYT has allowed us to improve the performance of wheat models under high temperature conditions.

Anticipated outcome in the coming year is the adoption of the improved models by NARS researchers in South Asia. This outcome will be fostered by providing NARS researchers with improved versions of the new models through existing networks associated with the DSSAT and APSIM modeling communities.

Annual progress towards outcome (end of 2015): NARS scientists from the University of Agriculture Faisalabad, the Arid Agricultural University Rawalpindi, the Pakistan Agricultural Research Council and/or the National Agricultural Research Centre begin using improved wheat models in their research on climate change.

Annual progress towards project outcome in the current reporting cycle (2015): An adaptation of the DSSAT-CROPGRO model (code and parameter changes) for simulating wheat growth added as a branch from the DSSAT core repository

Improved code for modeling wheat response to high temperature incorporated into the DSSAT core repository

The DSSAT-CSM-CROPSIM-CERES-Wheat model was used to simulate four hypothetical spring wheat genotypes with rooting depths of 0.5, 1, 1.5, and 2m at 960 locations across regions classified by CIMMYT as irrigated temperate (ME1), irrigated high-temperature-stressed, (ME5), and drought-prone (ME4) wheat megaenvironments. Crop evapotranspiration was simulated with the Priestley-Taylor and FAO56 methods. To assess long-term trends, the simulations were run as cropping sequences with carry-over of soil moisture from one season to the next. On average, depth of soil profiles for all environments were approximately 1.4m, thus, the greatest difference in simulated output for all variables was between the 0.5 and 1m rooting depths with diminishing effects beyond 1m. For irrigated environments in the present climate scenario, deeper rooting resulted in less required irrigation though without effect on simulated yield beyond 1m rooting. In ME5 and ME4, deeper rooting resulted in higher simulated yield. Across all environments, deeper roots increased simulated transpiration and decreased simulated soil water loss due to drainage.

Communication and engagement activities have contributed to achieving your Project outcomes: <Not defined>

Evidence documents of progress towards outcomes: <Not defined>

Annual progress towards outcome (end of 2016): <Not defined>

Submission: <pending>

Annual progress towards outcome (end of 2017): <Not defined>

Annual progress towards outcome (end of 2018): <Not defined>

Lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them: <Not defined>

4.2 Contribution to CCAFS Outcomes

RP SAs - Outcome 2019: Governments, private sector and farmer organizations increase their investments and develop incentive mechanisms to promote wide scale adoption of improved climate-smart practices and technologies

Indicator #1: FP1 Indicator: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019	
Target value: <Not defined>	Cumulative target to date: Cannot be Calculated
Target narrative: <Not defined>	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

2015		
Target value: 2 (Agricultural Research institutions in Pakistan (Pakistan Agricultural Research Council's National Agricultural Research Center and Ayub Agricultural Research Institute's Wheat Research Institute)	Cumulative target to date: Cannot be Calculated	Target achieved: <Not defined>
Target narrative: Breeders from the Pakistan Agricultural Research Council's National Agricultural Research Center and the Ayub Agricultural Research Institute's Wheat Research Institute in collaboration with crop modelers at the Arid Agriculture University, Rawalpindi and the University of Agriculture, Faisalabad, will develop sub-national climate-smart quantitative wheat breeding targets for different regions in Pakistan using improved wheat models and adopt screening methods for climate-smart traits in their national and sub-national wheat breeding programs.		
Narrative for your achieved targets, including evidence: <Not defined>		

Submission: <pending>

2015	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>	

2016	
Target value: <Not defined>	Cumulative target to date: Cannot be Calculated
Target narrative: <Not defined>	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways: <Not defined>

Collaborating with other CRPs: <Not defined>

Submission: <pending>

4.4 Outcome case studies

There is not an Outcome Case Study added.

Submission: <pending>

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

FP1 - MOG # 2: 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 plan of the gender and social inclusion dimension of the expected annual output

<Not defined>

Major Output groups - 2014

FP1 - MOG # 2: 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 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>

Major Output groups - 2015

Submission: <pending>

FP1 - MOG # 2: 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:

<Not defined>

Brief 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:

<Not defined>

Major Output groups - 2016

FP1 - MOG # 2: 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

<Not defined>

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

<Not defined>

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: <Not defined>

Submission: <pending>

5.2 Deliverables

Deliverable #1

Main Information	
Title: <Not defined>	
MOG : <Not defined>	
Main Type: <Not defined>	Sub Type: <Not defined>
Year of expected completion: 2015	
Status: <Not defined>	

Partners contributing to this deliverable
Partner #1 (Responsible): <Not defined>

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Submission: <pending>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #2

Main Information
Title: <Not defined>
MOG : <Not defined>
Main Type: <Not defined> Sub Type: <Not defined>
Year of expected completion: 2015
Status: <Not defined>

Partners contributing to this deliverable
Partner #1 (Responsible): <Not defined>

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>

Submission: <pending>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Deliverable Data sharing

Deliverable files

<Not defined>

Submission: <pending>

5.3 Summary on next-users

<Not defined>

Submission: <pending>

5.4 Project highlights

Submission: <pending>

6. Activities

Activity #1	
Title: Integrate wheat model improvements for high temperature into mainstream versions of DSSAT-CSM and APSIM	
Description: Collaborate with the DSSAT-CSM and APSIM model developers to ensure that model improvements developed at CIMMYT under the auspices of CCAFS are merged into the mainstream released versions of DSSAT-CSM and APSIM.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2015
Leader: Alderman, Phil <p.alderman@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: <Not defined>	

Activity #2	
Title: Generating climate-smart wheat breeding targets for South Asia using dynamic crop simulation modeling	
Description: This activity will involve using models to generate breeding targets for future climate conditions in South Asia. Simulations will be run using future climate projections for SA and parameters for heat/drought adaptive traits. The results of these simulations will be used to create climate-smart quantitative breeding targets. These breeding targets will be shared with NARS researchers through existing capacity-building networks to link breeding targets to phenotyping for climate-smart traits.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2015
Leader: Alderman, Phil <p.alderman@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: <Not defined>	

Lessons regarding your project activities and possible implications for the coming planning cycle: <Not defined>

Submission: <pending>

7. Leverages

<Not defined>

Submitted on 2016-03-03 at 05:39 UTC

Title: CIMMYT Quantification of GHG emission in contrasting tillage, residue and nutrient management scenarios in wheat, maize and rice-based cropping systems

Start date (dd-MM-yyyy)	01-01-2015	End date (dd-MM-yyyy)	31-12-2016
Management liaison	RP SAs - South Asia Region	Mgmt. liaison contact	Aggarwal, Pramod <P.K.Aggarwal@cgiar.org>
Lead organization	CIMMYT - International Maize and Wheat Improvement Center - India	Project leader	Sapkota, Tek <t.sapkota@cgiar.org>
Project type	CCAFS CORE	Detailed project workplan	<Not defined>

Project is working on

Flaship(s)	Region(s)
FP3: Low Emissions Agricultural Development	RP SAs: South Asia

Bilateral project(s) contributing to this project

This project does not have Bilateral projects

Summary

In CCAFS phase-I, we initiated GHGs measurement in five strategic research trials on rice, wheat and maize based cropping systems with key elements of cropping system management across IGP. Among these five trials, measurements need to be continued for at least one (ideally two) more years in two trials i.e. one in northwestern IGP and one in eastern IGP, in order to gather meaningful data. Here, we propose for the continuation of measurements in those two trials for the year 2015. Besides, we will also synthesize the GHG measurement works done in the region to determine the emission factors (Efs) for different management practices, identify the causes of variability in EF (if any) and recommend future direction for this type of work in the region.

Submitted on 2016-03-03 at 05:39 UTC

2. Partners

Partner #1 (Leader)

Institution: CIMMYT - International Maize and Wheat Improvement Center

Contacts

Type	Contact	Responsibilities and contributions
Project Leader	Sapkota, Tek <t.sapkota@cgiar.org>	Activity 2014-168 *Leader*.

Partner #2

Institution: BISA - Borlaug Institute for South Asia

CCAFS Partner(s) allocating budget: <Not defined>

Contacts

Type	Contact	Responsibilities and contributions
Partner	Kumar Jat, Dr. Raj <r.jat@cgiar.org>	Activity 2014-168 *Partner*.

Partner #3

Institution: DMR - Directorate of Maize Research

CCAFS Partner(s) allocating budget: <Not defined>

Contacts

Type	Contact	Responsibilities and contributions
Partner	Parihar, C.M <pariharcm@gmail.com>	Activity 2014-168 *Partner*.

Partner #4

Institution: CSSRI - Central Soil Salinity Research Institute

Submitted on 2016-03-03 at 05:39 UTC

CCAFS Partner(s) allocating budget: <Not defined>**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Sharma, P.C <pcsharma@cssri.ernet.in>	Activity 2014-168 *Partner*.

Partnerships overall performance over the last reporting period: The partners were very instrumental in running the agronomic trials where we could continue measuring GHG emission.

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

Submitted on 2016-03-03 at 05:39 UTC

3. Locations

Project level	Latitude	Longitude	Name
Province	25.5851	25.5851	Bihar
Province	29.7	29.7	Haryana

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

Science-based evidence for the mitigation potential of various tillage, residue and nutrient practices in wheat and maize based cropping systems in two production ecologies of India.

Annual progress towards outcome (end of 2015): Emission of greenhouse gases (CO₂, N₂O and CH₄) from rice-wheat and maize-wheat cropping systems under different tillage, crop establishment, residue and cropping system management scenario will be quantified. Similarly, the effect of precision nutrient management on GHG fluxes under different tillage and residue management will be determined and EF of various management practices will be identified. Using these ground data and other published literature, synergy and/ or trade-offs among agronomic productivity, economic profitability and GHG emissions under various management scenario mentioned above will be determined.

Annual progress towards project outcome in the current reporting cycle (2015): We completed field measurement of GHGs from various tillage, residue and N management strategies. We now have database from six different trials in maize- and wheat-based systems. The data from one trial is analyzed and published in peer reviewed journal and that from other trials are being analyzed and manuscripts are under preparation.

Communication and engagement activities have contributed to achieving your Project outcomes: We involved national research institutes, advance research institutes and universities as our research partners. Since they are involved in design, implementation and publication and research outputs it is expected the science based evidences produced will be used by the relevant stakeholders appropriately.

Evidence documents of progress towards outcomes: [NonCO2GHG_JIES.pdf](#)

Annual progress towards outcome (end of 2016): NA

Annual progress towards outcome (end of 2017): NA

Annual progress towards outcome (end of 2018): NA

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: Everything went well for this project.

4.2 Contribution to CCAFS Outcomes

RP SAs - Outcome 2019: Governments and global organizations make rational decisions about mitigation based on local, regional and global evidences about mitigation potential in agriculture

Submitted on 2016-03-03 at 05:39 UTC

Indicator #1: FP3 Indicator: # of low emissions plans developed that have significant mitigation potential for 2025, i.e. will contribute to at least 5% GHG reduction or reach at least 10,000 farmers, including at least 10% women.

2019	
Target value: NA	Cumulative target to date: Cannot be Calculated
Target narrative: NA	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

2015		
Target value: One policy recommendation for mitigation of GHG emissions in rice-wheat and maize-wheat cropping systems in India.	Cumulative target to date: Cannot be Calculated	Target achieved: 2.0
Target narrative: Emission factor (EF) determined for different tillage, nitrogen and residue management systems in rice-wheat and maize-wheat cropping systems.		
Narrative for your achieved targets, including evidence: We have GHG emission database for four different systems few of them have been analyzed and published.		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: NA		

2016	
Target value: NA	Cumulative target to date: Cannot be Calculated
Target narrative: NA	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		

Submitted on 2016-03-03 at 05:39 UTC

2014
Narrative for your achieved targets, including evidence: <Not defined>
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways: <Not defined>

Collaborating with other CRPs: <Not defined>

Submitted on 2016-03-03 at 05:39 UTC

4.4 Outcome case studies

There is not an Outcome Case Study added.

Submitted on 2016-03-03 at 05:39 UTC

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
<p>FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
Major Output groups - 2014
<p>FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers</p> <p>Brief bullet points of your expected annual 2014 contribution towards the selected MOG <Not defined></p> <p>Brief summary of your actual 2014 contribution towards the selected MOG: <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p> <p>Summary of the gender and social inclusion dimension of the 2014 outputs: <Not defined></p>

Submitted on 2016-03-03 at 05:39 UTC

FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

Brief bullet points of your expected annual 2014 contribution towards the selected MOG

<Not defined>

Brief summary of your actual 2014 contribution towards the selected MOG:

<Not defined>

Brief 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>

Major Output groups - 2015

FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

We have database on GHG emission from various management options from wheat and maize-based cropping systems. The data will be analyzed, published and database will be made available through public websites.

Brief 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:

NA

FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

The output of our analyses will serve as cornerstone to identify low-emission CSA.

Brief 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:

NA

Submitted on 2016-03-03 at 05:39 UTC

Major Output groups - 2016

FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

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

<Not defined>

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

<Not defined>

FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

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

<Not defined>

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

<Not defined>

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: <Not defined>

Submitted on 2016-03-03 at 05:39 UTC

5.2 Deliverables

Deliverable #1

Main Information	
Title: Soil fluxes of GHGs under different tillage, residue and nutrient management quantified	
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Datasets
Year of expected completion: 2015	
Status: Complete	

Next-user
State Government, NGOs, Students and GHG mitigation scientists
Knowledge, attitude, skills and practice changes expected in next-user: Increased knowledge
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Database and publications

Partners contributing to this deliverable
Partner #1 (Responsible): Sharma, P.C <pcsharma@cssri.ernet.in>, CSSRI - Central Soil Salinity Research Institute
Partner #2: Kumar Jat, Dr. Raj <r.jat@cgiar.org>, BISA - Borlaug Institute for South Asia

Deliverable Ranking	
Address gender and social inclusion aspect	1
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: other
Dissemination URL: <Not defined>

Submitted on 2016-03-03 at 05:39 UTC

Deliverable Metadata
Description: we are still in the process of analyzing data and publication of the results. We will upload the database in Metadata base after publication.
Creator / Authors: x
Author Identifier: x
Publication / Creation date: x
Language: x
Coverage: x
Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #2

Main Information
Title: Mitigation co-benefit of resilient and productive agricultural practices quantified
MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives
<div> Main Type: Data and information outputs, including datasets, databases and models </div> <div> Sub Type: Datasets </div>
Year of expected completion: 2015
Status: Complete
Next-user
State Government, NGOs, Students and GHG mitigation scientists
Knowledge, attitude, skills and practice changes expected in next-user: Increased knowledge and support of decision making
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Database and publications
Partners contributing to this deliverable
Partner #1 (Responsible): Kumar Jat, Dr. Raj <r.jat@cgiar.org>, BISA - Borlaug Institute for South Asia

Submitted on 2016-03-03 at 05:39 UTC

Deliverable Ranking	
Address gender and social inclusion aspect	1
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: We will share the metadata after publication.
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Sapkota et al. - 2015 - Tillage, residue and nitrogen management effects on methane and nitrous oxide emission from rice–wheat system of.pdf

Submitted on 2016-03-03 at 05:39 UTC

5.3 Summary on next-users

Next user #1
<p>Key next user for the current reporting period. Key game changers. Observed Knowledge, Attitude, Skills and practice changes: Scientific community working in the area of climate smart practices and low emission agriculture. Government organizations responsible for promotion of low-emission agriculture.</p>
<p>Strategies (facilitation, engagement, knowledge sharing etc.) you used to encourage and enable this next user to utilize deliverables and adopt changes: We have involved various government institutes (Agricultural research centers, advanced research institutes and universities) as our core partner in design and implementation of these research. Further, we are disseminating the research findings to other potential users by means of workshop presentation, field days etc.</p>
<p>Reported deliverables serve as evidence towards this achieved change: Publication</p>
<p>Lessons and implications for the next planning cycle: NA</p>

Submitted on 2016-03-03 at 05:39 UTC

5.4 Project highlights

Submitted on 2016-03-03 at 05:39 UTC

6. Activities

Activity #1	
Title: Measurement of GHG emission from the existing trials	
Description: The measurement GHG flux will be carried out using static chamber method. Gas samples from the pre-deployed chambers will be collected once a week following the standard protocol developed for static-chamber-based GHG measurements. Gas sampling campaign will be intensified during the events that induce GHGs emission such as tillage, fertilization, irrigation or rainfall. The concentration of specific gas in the sample will be analyzed in gas chromatograph and emission rate quantified by regressing the gas quantity with time. Emission on non-measurement dates will be quantified through linear interpolation method to calculate cumulative seasonal emission	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2015
Leader: Sapkota, Tek <t.sapkota@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: Complete	

Lessons regarding your project activities and possible implications for the coming planning cycle: NA

Submitted on 2016-03-03 at 05:39 UTC

7. Leverages

<Not defined>

Submitted on 2016-02-29 at 16:02 UTC

Title: CIMMYT Agro-economic analysis of all climate change mitigation options

Start date (dd-MM-yyyy)	01-01-2015	End date (dd-MM-yyyy)	30-06-2016
Management liaison	RP SAs - South Asia Region	Mgmt. liaison contact	Aggarwal, Pramod <P.K.Aggarwal@cgiar.org>
Lead organization	CIMMYT - International Maize and Wheat Improvement Center - Mexico	Project leader	Stirling, Clare <c.stirling@cgiar.org>
Project type	CCAFS CORE	Detailed project workplan	<Not defined>

Project is working on

Flaship(s)	Region(s)
FP3: Low Emissions Agricultural Development	RP SAs: South Asia

Bilateral project(s) contributing to this project

This project does not have Bilateral projects

Summary

India is the world's fourth largest economy and fifth largest greenhouse gas (GHG) emitter, accounting for about 5% of global emissions with further increases expected in the future. Whilst currently not a priority of the GoI, the agricultural sector is highly vulnerable to changing climate and is also a major driver of climate change accounting for 17.6% of gross national emissions according to 2007 estimate. With the overriding priority of the GoI being maintenance of high economic growth rates in order to raise living standards, emission contributions of various sectors may have changed in recent years.

This study proposes to take a bottom-up, stakeholder-informed approach to the analysis of mitigation options in India agriculture to address the questions:

What are the major sources of GHG emissions in agriculture?

Which are the most promising mitigation options in relation to factors such as: ease of uptake, technical feasibility, mitigation potential, cost-effectiveness.

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2. Partners

Partner #1 (Leader)

Institution: CIMMYT - International Maize and Wheat Improvement Center

Contacts

Type	Contact	Responsibilities and contributions
Project Leader	Stirling, Clare <c.stirling@cgiar.org>	Activity 2014-151 *Leader*.

Partner #2

Institution: University of Aberdeen

CCAFS Partner(s) allocating budget: <Not defined>

Contacts

Type	Contact	Responsibilities and contributions
Partner	Hillier, Jonathon <j.hillier@abdn.ac.uk>	Activity 2014-151 *Partner*. Assist with data sourcing and leading the deliverable on cross-comparison of study model outputs with an Integrated Assessment model and contributing to the modelling GHG emissions from agricultural sector and MRV deliverables.

Partner #3

Institution: University of Jadavpur

CCAFS Partner(s) allocating budget: <Not defined>

Contacts

Type	Contact	Responsibilities and contributions
Partner	Roy, Joyashree <joyashreeju@gmail.com>	Activity 2014-151 *Partner*. Activity 2014-149 *Leader*.

Partnerships overall performance over the last reporting period: The main partnership has been between CIMMYT and the University of Aberdeen which has worked well but

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Partner #3 - the Jadavpur University was dropped due to budget cuts early on.

Lessons regarding your partnerships and possible implications for the coming reporting cycle: Not relevant as this project has been discontinued.

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3. Locations

Project level	Latitude	Longitude	Name
Country	Not applicable	Not applicable	India

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

The Government of India will utilize the findings of Project Outputs to inform its ongoing process of policy review aimed at refining its sectoral climate change strategies, priorities and policies in order to take into account the contribution of agriculture to total GHG emissions. The outputs of this project will provide a definitive analysis of the potential role of agriculture in GHG mitigation vis-a-vis other sectors in India.

Annual progress towards outcome (end of 2015): NB This is an 18 month study and so no outcome story would be expected until 2016 reporting year. Eighteen months is an exceptionally short period in which to expect significant movement along the Output-to-Outcome pathway. This is particularly true in cases where the ultimate goal is modification of government policy, given the time frame required for policy change to take place in the public sector. The expected outcome within this period is therefore not policy change itself, but incorporation of the findings for the studies into the ongoing process of policy review. In order to accomplish this, the project will have developed a communication strategy (including consultation workshops) for keeping the Ministry of Environment and Forests and the Ministry of Agriculture fully engaged in the process of output development and the findings of these studies as they emerge as a means to creating a sense of ownership and identifying how best to move along the research uptake pathway.

Annual progress towards project outcome in the current reporting cycle (2015): After preliminary analyses of the data, we organized two stakeholders' consultation meetings to validate our data sources, assumptions and methods of analysis along with the preliminary results and to obtain feedback on different trajectories for agriculture development so that scenarios could be developed to identify plausible mitigation options. On this basis we have been developing scenarios to identify various mitigation options that are achievable (if adopted) and economically feasible. The plan had been to produce final recommendations by the mid of 2016.

Communication and engagement activities have contributed to achieving your Project outcomes: We realized from the very beginning that validating our data sources, assumptions and calculation methods would be very important to ensure ownership of the findings by potential end users. Therefore, we organized a series of stakeholder consultation workshops to share our plans and preliminary results and to obtain inputs for scenario building. By adopting a bottom-up analysis with input from key stakeholders in terms of data, assumptions and trajectories of agricultural development will ensure that the mitigation strategies will be more relevant and smart in terms of Indian agriculture.

Evidence documents of progress towards outcomes: <Not defined>

Annual progress towards outcome (end of 2016): The Government of India will utilize the findings of Project Outputs to inform its ongoing process of policy review aimed at refining its sectoral climate change strategies, priorities and policies in order to take into account the

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contribution of agriculture to total GHG emissions

Annual progress towards outcome (end of 2017): Not relevant as this project is to be phased out in 2016.

Annual progress towards outcome (end of 2018): <Not defined>

Lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them: <Not defined>

4.2 Contribution to CCAFS Outcomes

RP SAs - Outcome 2019: Governments and global organizations make rational decisions about mitigation based on local, regional and global evidences about mitigation potential in agriculture

Indicator #1: FP3 Indicator: # of low emissions plans developed that have significant mitigation potential for 2025, i.e. will contribute to at least 5% GHG reduction or reach at least 10,000 farmers, including at least 10% women.

2019	
Target value: <Not defined>	Cumulative target to date: 2
Target narrative: <Not defined>	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

2015		
Target value: 2	Cumulative target to date: 2	Target achieved: 0.0
Target narrative: <Not defined>		
Narrative for your achieved targets, including evidence: Database and preliminary analysis has been completed. Stakeholders' consultation workshops were organized and we have developed various scenario for GHG mitigation based on the inputs from Stakeholders participated in the workshop. We are hopeful that our findings in terms of identifying emission hotspot and mitigation options will be a valuable contribution to INDMC of the government of India.		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		

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2015	
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: not applicable	

2016	
Target value: 0	Cumulative target to date: 2
Target narrative: Not realistic to provide target values as project is to be phased out in 2016 which will inevitably impact on moving from outputs to outcomes.	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: Not realistic to provide target values as project is to be phased out in 2016 which will inevitably impact on moving from outputs to outcomes.	

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		
Narrative for your achieved targets, including evidence: <Not defined>		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>		

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways: <Not defined>

Collaborating with other CRPs: <Not defined>

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4.4 Outcome case studies

There is not an Outcome Case Study added.

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5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
<p>FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
Major Output groups - 2014
<p>FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers</p> <p>Brief bullet points of your expected annual 2014 contribution towards the selected MOG <Not defined></p> <p>Brief summary of your actual 2014 contribution towards the selected MOG: <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p> <p>Summary of the gender and social inclusion dimension of the 2014 outputs: <Not defined></p>

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FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

Brief bullet points of your expected annual 2014 contribution towards the selected MOG

<Not defined>

Brief summary of your actual 2014 contribution towards the selected MOG:

<Not defined>

Brief 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>

Major Output groups - 2015

FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

Development of database and preliminary analyses on GHG emission from agriculture and livestock production at national level in India and more detailed analysis of the technically and economically feasible mitigation scenarios.

Brief 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:

not applicable

FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

Stakeholder scenarios developed with key sector experts in Haryana and Bihar together with productivity and cost data are being used as inputs to an CFT-derived tool for the tropics to develop a unique 'bottom-up' set of cost-effective mitigation options in India.

Brief 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:

N/A

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Major Output groups - 2016

FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

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

A unique bottom up, stakeholder-informed analysis of GHG emissions and mitigation potential in agriculture in India.

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

Limited budget inevitably limits the ability to tackle these issues with the level of rigour and detail they deserve.

FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

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

Publication that identifies and prioritises state-level GHG mitigation options in agriculture in India. If funds permit, a follow up stakeholder meeting to raise awareness of project outputs amongst State-level policy makers in Haryana and Bihar.

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

Limited budget inevitably limits the ability to tackle these issues with the level of rigour and detail they deserve.

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: The stakeholder engagement process provided a rich source of expertise to inform the bottom-up analysis and will result in a uniquely relevant analysis for decision makers. Furthermore the volume of farm-level data that exists in India has allowed us to test some critical hypothesis in terms of the relationship between GHG emissions and NUE.

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5.2 Deliverables

Deliverable #1

Main Information	
Title: A high-level publication on GHG mitigation options for the states of Haryana and Bihar	
MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives	
Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2016	
Status: <Not defined>	

Next-user
Researchers, state-level policy makers
Knowledge, attitude, skills and practice changes expected in next-user: Methods of analysis and better informed decisions making for policy prioritisation.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Raising awareness of project outputs through stakeholder engagement at meetings and conferences (NB these activities are no longer budgeted for and so are likely only to take place on the back of other project activities).

Partners contributing to this deliverable
Partner #1 (Responsible): Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

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Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

5.3 Summary on next-users

Next user #1
<p>Key next user for the current reporting period. Key game changers. Observed Knowledge, Attitude, Skills and practice changes: Various stakeholders (government departments) at the state level (e.g. state agricultural department, livestock department, ICAR research station in the state and government extension agencies) are the key next users of our deliverables. By organizing stakeholder workshop to share result of our preliminary analyses help those stakeholders understand the magnitude of emission at state level and where the emission hotspots are. By sharing our preliminary analyses and obtaining feedback this not only increased understanding of mitigation options in agriculture but also helped us refine our analysis.</p>
<p>Strategies (facilitation, engagement, knowledge sharing etc.) you used to encourage and enable this next user to utilize deliverables and adopt changes: Engagement, sharing and feedback. As our analyses are based on the inputs and feedback from the relevant stakeholders, it will increase the likelihood of adoption.</p>
<p>Reported deliverables serve as evidence towards this achieved change: Internal reports and draft publication</p>
<p>Lessons and implications for the next planning cycle: If further funding is available then the results from this analysis should be shared with the original stakeholders and with a wider number of national stakeholders to consolidate the early buy-in we had achieved for project outputs and so enhance likely uptake of key messages by decision makers.</p>

5.4 Project highlights

Project highlight Information #1	
Title: Developing plausible bottom-up scenario for agricultural GHG mitigation in Haryana and Bihar, India	
Author: Clare Stirling & Tek Sapkota	Subject: GHG mitigation
Publisher: <Not defined>	Year: 2015
Project highlights types Participatory action research	Start date: 2016-02-26
End date: 2016-02-26	Is global: No
Country: India	Keywords: Stakeholder, greenhouse gas, mitigation, agriculture, India
Highlight description: Developing plausible scenario for agricultural GHG mitigation in Haryana and Bihar, India	
Introduction / Objectives: We developed set of plausible bottom-up agricultural development and mitigation scenarios that would be used to inform the analysis of future greenhouse gas mitigation strategies taking into account trajectories for future policies and technologies in the states of Haryana and Bihar.	
Results: Stakeholders' consultation meetings were organized, one in Bihar and one in Haryana, to share the preliminary findings of our analysis about GHG emission from agriculture in the respective states. The stakeholders involved in the discussions were state agriculture and livestock department, ICAR stations in the state, representative for agriculture science centres (KVKs), Agricultural university in the state and commodity research directorates. The objectives of the workshop were not only to share our analyses but also to get critical feedback from the stakeholders on the processes and assumption of the analyses. Discussions were also concentrated on developing business-as-usual and aspirational scenario on various aspects contributing to overall agricultural development. The direction and magnitude of changes on natural resource bases, technological advancement, socio-economic and institutional/policy issues were discussed and quantified. The outputs of these discussions were used to develop various scenarios of GHG mitigation from agricultural production in the two states. We are now analysing these scenario and collecting necessary data to develop plausible mitigation options in agriculture for those two states which will be easy to uptake, technologically feasible and cost-effective.	
Partners: • Borlaug Institute for South Asia (BISA) • State Agriculture Department (Bihar and Haryana) • State Agriculture Department (Bihar and Haryana) • Central Soil Salinity Research Institute (Haryana) • Indian Council of Agricultural Research, Eastern Regional Centre (Patna, Bihar) • Agricultural Science Centre representatives (Bihar and Haryana)	
Links / Sources for further information: <Not defined>	

6. Activities

Activity #1	
Title: An in-depth analysis of all development sectors, including agriculture, in India to identify if agricultural mitigation should be a priority; what is the significance of agricultural mitigation in India?	
Description: GHG emissions from different sectors such as the energy, transportation, industry, buildings/infrastructure, agro-forestry including agriculture will be quantified by utilizing a methodology based on the EDAM (Emission driver analysis method) approach (Oh, Wehrmeyer and Mulugetta, 2010) and various data sources including the annual survey of industries, central electricity authority database, India stat database, census data, planning commission and sectoral ministry published databases. Here future projections of emissions across sectors will consider a baseline and 'realistic' business-as-usual (BAU) scenario based on government plans and programmes. The key deliverables from WP 1 will be: i. Emission trajectories and quantification of mitigation potentials for each sector that will be comparable. A BAU for each of the energy supply and energy end-use sectors ii. Quantified sector-wide mitigation potentials with associated investment needs iii. Packages of options, and mitigation potentials and associated co-benefits . iv. An analysis of barriers to uptake and capacity need assessment v. iv. A comprehensive report summarising the above. The report will compare the mitigation delivered by different agricultural practices with those from other sectors and will support priority setting by the national governments and investors.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 30-06-2016
Leader: Roy, Joyashree <joyashreeju@gmail.com>, University of Jadavpur	
Status: Cancelled	Justification: This activity was cancelled due to budget cuts.

Activity #2	
Title: An in-depth analysis of mitigation options within the agricultural sector for India.	
Description: We propose to forge partnership with a range of stakeholders so that we have access to data from a wide range of sources and this will include an inception workshop . Using this dataset we will produce an estimate of GHG emissions by state and sector for India. In order to do this we will construct a tool using targeted empirical models for emissions. We will subsequently, and using the above tool, conduct a state-specific assessment of the technical potential of a range of mitigation options for the major products and classes of agriculture in India. For the suite of mitigation options specified in the CCAFS mitigation tool, India-specific costs for implementation at state level will be determined.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 30-06-2016
Leader: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	

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<p>Status: On-going</p>	<p>Justification: We are using an updated version of cool farm tool (CFT) to estimate GHG emission from the agriculture to determine the hotspot of emission and to identify cost-effective mitigation options. State-wise data on production inputs, management and yield were collected and model was run to estimate emission from production activities. Similarly, data on livestock population, management and production has been collected to use in the model to estimate GHG emission from livestock production. The data has been analysed and we are preparing a peer reviewed article based on the finding. Hopefully the paper will be submitted by the end of March, 2016.</p> <p>Two stakeholder consultation meetings were organized, one in Haryana and one in Bihar, to share the result of preliminary analysis and obtain feedback on input data, assumptions and result. During these meetings, stakeholders' inputs were also obtained on trajectories of development in agricultural sector to develop business-as-usual and plausible aspirational scenario. Currently, we are synthesizing the outputs of these stakeholder consultation meetings and collecting cost data to develop cost-effective mitigation options under different development scenario. Although the project is affected by budget cut, we hope to complete this analysis and produce a deliverable by the middle to 2016.</p>
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Lessons regarding your project activities and possible implications for the coming planning cycle: Preliminary analysis suggest a very interesting relationship between GHG emissions and NUE that could be used to help inform targeting of abatement strategies in agriculture. This warrants further investigation.

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7. Leverages

<Not defined>

CCAFS COFUNDED W1_W2_W3

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

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

Project is working on

Flaship(s)	Region(s)
FP1: Climate-smart practices	RP EA: East Africa

Bilateral project(s) contributing to this project
152 - Objective 4. SIMLESA II Project: To support the development of local and regional innovations systems and scaling out modalities
190 - The Agricultural Modeling Intercomparison and Improvement project (AgMIP) - Regional Integrated Assessments in SSA and SA

Summary

Maize, legumes and cassava are major staple crops in eastern Africa, usually produced by crop-livestock smallholders under rainfed conditions. Maize and legumes are amongst the most sensitive crops to weather variability and climate change, whereas cassava is regarded as amongst the least sensitive crops. Livestock plays key roles in helping farmers cope with different types of shocks.

This project will synthesise knowledge and data generated under CCAFS Phase I (and related bilateral projects) on climate smart agricultural (CSA) practices to produce acceptable, gender-responsive CSA portfolios. Based on available climate data, we will identify and map key vulnerabilities and climate risks as well adaptation strategies to guide participatory CSA portfolio evaluation. We will evaluate and determine social, productivity and economic

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impacts and tradeoffs of different CSA portfolios through systems' modelling and participatory approaches. The project will work closely with CCAFS Climate Smart Villages, flagship and

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bilateral projects and CRPs.

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2. Partners

Partner #1

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contacts

Type	Contact	Responsibilities and contributions
Partner	Sommer, Rolf <r.sommer@cgiar.org>	<p>Collaborative activity: contribution to tools development, methods, (data collection where possible) writing (and review), M&E process, knowledge sharing.</p> <p>Lead Activity #3, and contribute significantly to activity #4, and #5 especially for activities involving beans and soils.</p> <p>Activity 2014-305 *Partner*.</p> <p>Activity 2014-312 *Partner*.</p> <p>Activity 2014-322 *Partner*.</p> <p>Activity 2014-324 *Partner*.</p> <p>Activity 2014-318 *Leader*.</p>

Partner #2

Institution: ILRI - International Livestock Research Institute

Contacts

Type	Contact	Responsibilities and contributions
Partner	Ericksen, Polly <p.ericksen@cgiar.org>	<p>Provide leadership and input to all activities involving livestock components, especially incorporation of forage crops into CSAP portfolios for scaling.</p> <p>contribution to tool development, methods, (data collection where possible) writing (and review), M&E process, knowledge sharing, partnerships, and capacity development.</p> <p>Contribute to activity #3, #4, and #5</p> <p>Activity 2014-305 *Partner*.</p> <p>Activity 2014-312 *Partner*.</p> <p>Activity 2014-318 *Partner*.</p> <p>Activity 2014-322 *Partner*.</p> <p>Activity 2014-324 *Partner*.</p> <p>NOTE: ILRI is no longer part of this project</p>

Partner #3

Submitted on 2016-03-03 at 16:04 UTC

Institution: IITA - International Institute of Tropical Agriculture**Contacts**

Type	Contact	Responsibilities and contributions
Partner	van Asten, Piet <p.vanasten@cgiar.org>	Provide leadership and input to all activities involving cassava components, especially incorporation of cassava into CSAP portfolios for scaling. Contribution to tool development, methods, (data collection where possible) writing (and review), M&E process, knowledge sharing, partnerships, and capacity development. Contribute to activity #3, #4, and #5 Activity 2014-312 *Partner*. Activity 2014-318 *Partner*. Activity 2014-322 *Partner*. Activity 2014-324 *Partner*.

Partner #4 (Leader)**Institution:** CIMMYT - International Maize and Wheat Improvement Center**Contacts**

Type	Contact	Responsibilities and contributions
Project Leader	Misiko, Michael <m.misiko@cgiar.org>	Activity 2014-397 *Leader*.

Partner #5**Institution:** CIMMYT - International Maize and Wheat Improvement Center**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>	Activity 2014-312 *Leader*.
Partner	Tongruksawattana, Songporne <s.tongruksawattana@cgiar.org>	Activity 2014-305 *Leader*.
Partner	Misiko, Michael <m.misiko@cgiar.org>	contribution to tool development, methods, (data collection where possible) writing (and review), M&E process, knowledge sharing, partnerships, and capacity development. Activity 2014-318 *Partner*. Activity 2014-324 *Leader*.

Submitted on 2016-03-03 at 16:04 UTC

Partner	De Groote, Hugo <h.degroote@cgiar.org>	Activity 2014-322 *Leader*.
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Partner #6**Institution:** KARI - Kenya Agricultural Research Institute**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - Mexico

Contacts

Type	Contact	Responsibilities and contributions
Partner	Kisilu, Raphael <rkkisilu@gmail.com>	Lead SIMLESA implementing partner in Kenya Activity 2014-397 *Partner*.

Partner #7**Institution:** SARI - Selian Agricultural Research Institute**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - Ethiopia

Contacts

Type	Contact	Responsibilities and contributions
Partner	Sayula, George <gsayula@hotmail.com>	Objective/ Activity 4 - field CSAP evaluation and partnerships in Tanzania

Partner #8**Institution:** Ministry of Agriculture, Kenya**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - Mexico

Contacts

Submitted on 2016-03-03 at 16:04 UTC

Type	Contact	Responsibilities and contributions
Partner	Kinywee, Julius <kinyweejulius@gmail.com>	See the many partners above

Partnerships overall performance over the last reporting period: Important successes include:

- i) CIAT, IITA: invaluable
- ii) CCAFS EA - critical supporter
- iii) ICRISAT, ICIPE: flagship technologies
- iv) MoA – extension: three countries. Also, Devolved Govts/ District admin
- v) Farmer Training Centres - CSAP evaluations (Ken)
- vi) World Vision – water management - planned 2016 (Ken)
- vii) ACRE Africa – crop insurance (Ken), USAID Fintrack – legume promotion (Ken)
- viii) Farmer CBOs (to form AIPs in 2016)
- ix) NARS - fully engaged: KALRO (Ken); SARI (Tanzania); NARO, Makerere University (Uganda) - decisive partnerships
- x) Hiccups relating to funds i) delays ii) cuts iii) uncertainty limited engagement with CRS, ILRI

Lessons regarding your partnerships and possible implications for the coming reporting cycle: Due to funds cuts, there may only be limited partnerships, especially with: i) CIAT, IITA ii) CCAFS EA iii) ICRISAT, ICIPE iv) MoA – extension v) one Farmer Training Centre vi) NARS vii) Farmer CBOs (to form AIPs in 2016)

We're unsure if plans for partnering with the following will materialise or continue:
viii) World Vision ix) ACRE Africa x) CRS xi) ILRI

Submitted on 2016-03-03 at 16:04 UTC

3. Locations

Project level	Latitude	Longitude	Name
Country	Not applicable	Not applicable	Kenya
Country	Not applicable	Not applicable	Tanzania
Country	Not applicable	Not applicable	Uganda
CCAFS Site	-0.269	-0.269	Nyando
CCAFS Site	-1.809	-1.809	Makueni
CCAFS Site	-0.621	-0.621	Kagera Basin
CCAFS Site	-4.79	-4.79	Usambara

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

In 2019 National Agricultural Research Institutions (KALRO – Kenya, NARO – Uganda, ARI – Tanzania), national agricultural development programmes (e.g. ASDSP in Kenya, ASDP in Tanzania), major international NGOs (e.g. CRS), national level NGOs, and IARCs including other CRPs and CG centres are applying best-bet CSA portfolios co-developed through the project. Besides, these organizations are further developing and packaging appropriate CSA options based on delivery mechanisms designed by the project, while public and private agro-advisory services are scaling out the packages beyond target sites. Finally, complementarity with the PABRA alliance and bilateral projects (SIMLESA) enables further scaling of the CSA options. These will lead to increased agricultural productivity, enhanced food security, higher incomes, and resilience.

National and subnational governments in the four countries are institutionalizing principles of participatory research and agricultural innovation platforms, including through integration into agricultural extension activities, and creating opportunities for equitable agricultural investments through public-private-non-profit partnerships.

Annual progress towards outcome (end of 2015): Project partners and public institutions at national and subnational levels are informed by CCAFS science on climate risks and vulnerabilities, the captured diversity of maize-bean-cassava-livestock small holder systems, and initial data on farm household typologies for gender-response targeting of CSAP portfolios in maize-bean-livestock smallholder systems. First-sets of CSAPs are identified and discussed with partners in workshops. This provides the basis for the participatory testing and evaluation of CSAPs in 2016 and 2017.

"FOR REPORTING IN Sep 2015: At least 3 million farmers receiving and benefiting from CSA-supporting information and services in 2015 through a network of more than 2000 farm supply businesses"

Annual progress towards project outcome in the current reporting cycle (2015): Through CSA evaluations:

- i) Partners (listed in the introduction) are participating in on-farm and on-station interactive trials
- ii) CSA technologies have been identified to match climate risks and vulnerabilities
- iii) the diversity of maize-bean-cassava-livestock smallholder systems have been captured - initial data on-farm household typologies for gender-response targeting of CSAP portfolios in maize-bean-livestock smallholder systems.
- iv) Participatory testing and evaluation of CSAPs in 2016 on-going
- v) Refer to Sep 2015 reporting: At least 1.5 million farmers receiving and benefiting from CSA-supporting information and services in 2015 through a network of more than 2000 farm supply businesses. This is based on AGMARK partnership

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Communication and engagement activities have contributed to achieving your Project outcomes: The 2015 activities; field evaluations of CSA portfolios, project meetings involving primary and secondary partners, and partnership for scaling activities have created significant awareness beyond PEACSA sites. The 2015 programme on “Scaling Climate Smart Agriculture” covered nine Kenyan counties with more than 10 million inhabitants. This work by AGMARK (Agricultural Market Development Trust) involved a host of (tertiary) partners especially the National Cereals and Produce Board, over 2000 agrodealers, local departments of agriculture, bilateral projects at AGMARK, etc. Between the core SIMLESA activities and the AGMARK process, more than 20 national, international and regional organisations have been directly engaged.

Evidence documents of progress towards outcomes: <Not defined>

Annual progress towards outcome (end of 2016): Public–private–non-profit actors at national and sub-national levels are initiating new partnerships which provide the basis for incentive mechanisms based on the Agricultural Innovation Platform approach that explicitly promote CSA along several value chains, informed by CCAFS science.

The first set of evaluation data on CSA options and promising endogenous practices are discussed among project partners (including CRS, national NGOs and the three NARIs), and lessons are derived to optimize the second round of testing in 2017.

Annual progress towards outcome (end of 2017): Established Agricultural Innovation Platforms in the three sites are providing feedback, including through field evaluations and documentation of CSA options, providing a platform for learning among national and sub-national governments, private sector participatory planning and action based on CCAFS science.

An advanced set of evaluation data on CSA options and promising endogenous practices are discussed among project partners (including NGOs and the three NARIs), and lessons are derived to optimize the final round of testing for lessons recording in 2018.

Annual progress towards outcome (end of 2018): <Not defined>

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: PEACSA is on course. Its participatory programme is resulting in CSAP portfolios that are widening smallholder options for resilient agriculture. The involvement of key partners (incl. farmers, farmer entities, research, extension, private sector, policy makers) is generating context-, household-, multi-scalar, and gender-specific knowledge that promises to result in sustainable CSA. PEACSA science is triggering co-generation of evidence to inform initiatives and investments by development partners.

PEACSA assumptions regarding climate predictions, household types, interest to farmers and other end users, partner participation, and policy outcomes are still valid.

4.2 Contribution to CCAFS Outcomes

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RP EA - Outcome 2019: National Agricultural Research Institutions (KARI, NARO, ARI, EIAR), IARCs, and Ministries of Agriculture are developing and packaging appropriate CSA technologies and practices to increase agricultural productivity, enhance food security, incomes and mitigation, and build resilience; Agro-advisory services are testing and using new delivery mechanisms for CSA adoption.

Indicator #1: FP1 Indicator: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019	
Target value: 4 NARIs, 2 International NGOs, 3 local NGOs, 2 Sub-national governments	Cumulative target to date: Cannot be Calculated
Target narrative: By 2019, KALRO (Kenya), NARO (Uganda), SARI (Tanzania) are adopting and scaling (institutionalizing, sharing) CSAPs as a result of participatory testing and evaluation, and innovative partnerships (PPPs). CRS, World Vision and the local NGOs (AGMARK, EFA, CIDI) are applying the best-bet CSAPs and further developing and packaging them to reach new communities as a result of participatory evaluations and PPPs. At least two sub-national governments have institutionalized the participatory research approach and innovation platforms, making the CSAPs part of their official extension services, as a result of the continuous engagement through policy dialogue.	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

2015		
Target value: 4 NARIs	Cumulative target to date: Cannot be Calculated	Target achieved: 7.0
Target narrative: In 2015, the project is developing mechanisms to characterize the diversity and climate risk environments of farm households and farming systems to co-evaluate CSAPs with NARIs in the four project countries. This will support co-learning and sharing of information in order to identify synergies and opportunities.		
Narrative for your achieved targets, including evidence: 3 National research institutes (KALRO - Ken, NARO - Uganda, SARI - Tanzania) 3 National/ sub-national extension organisations (Makueni County - Ken, MoA - Tz, Uganda) 1 National Cereals and Produce Board (Ken)		
Whilst these national/ sub-national organisations/ initiatives are not yet independently applying or extending PEACSA CSA portfolios, they're firmly participating (and even leading local efforts) to prioritise and inform project implementation, esp. to test CSA options using CCAFS science and decision support tools.		

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2015
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Gender has been prioritised throughout PEACSA activities in 2015: i) Household typology research - 50% of respondents in Focus Group Discussions ii) Purposive targeting of participants in field evaluations - at least 50% iii) During the AGMARK scaling - at least 30% of the 1.5m materials distributed among women

2016	
Target value: 8	Cumulative target to date: Cannot be Calculated
Target narrative: NARIs in the three countries (KALRO, NARO, SARI), CRS, and three national NGOs (CIDI, EFA, AGMARK) participate in the testing and evaluation of CSAPs, providing feedback. New partnerships that enable participatory testing are strengthened or initiated.	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: At least 30% of farmers participating in the CSA evaluation, receiving CSA portfolio advice, and actively participating in Agricultural Innovation Platforms are women and youth.	

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		
Narrative for your achieved targets, including evidence: <Not defined>		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>		

RP EA - Outcome 2019: Subnational and national governments adopting Climate Smart Villages models and scaling up CSA practices to other farming communities in line with Local Adaptation Plans of Agriculture (LAPAs), providing feedback to researchers and agro-advisory agencies and creating opportunities for investments through local investment partnerships for productivity and enhanced resilience.

Indicator #1: FP1 Indicator: # of public-private actors at national and sub-national levels are using new incentive mechanisms or business models/ markets that explicitly promote climate smart approaches along the value chain, using CCAFS science

Submitted on 2016-03-03 at 16:04 UTC

2019	
Target value: <Not defined>	Cumulative target to date: 8
Target narrative: <Not defined>	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

2015		
Target value: 0	Cumulative target to date: 0	Target achieved: 0.0
Target narrative: <Not defined>		
<p>Narrative for your achieved targets, including evidence: PEACSA is involving public and private actors at national and sub-national levels. Among the private/ not-for-profit actors include Acre Africa that is involved in crop insurance. Acre Africa sees PEACSA as an appropriate platform, especially through the planned Agricultural Innovation Platforms to reach an organised farmer population for sustainability. There is enhanced enthusiasm among agro-dealers. Feedback (through selected visits shows deeper-than-anticipated interest in CSA scaling. This interest is hinged on the logic that high awareness of Conservation Agriculture as cost-effective system will enhance sales of herbicides, drought tolerant germplasm, and related equipment. These are unforeseen incentives being generated through PEACSA.</p>		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
<p>Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Gender has been prioritised throughout PEACSA activities in 2015: i) During the AGMARK scaling - at least 30% of the 1.5m materials distributed among women</p>		

2016	
Target value: 8	Cumulative target to date: 8
Target narrative: 8 of public-private actors at national and sub-national levels are partnering through AIP, based on innovative business models to scale CSA along the value chain, using CCAFS science	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: Increased participation among rural target women, from 30% in 2017, to at least 43% based on AIP membership and decision making in initiated CSA broad activities.	

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		

Submitted on 2016-03-03 at 16:04 UTC

2014
Narrative for your achieved targets, including evidence: <Not defined>
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways

Activity 2014-305: Through linkages with other FP, and CRPs.

Activity 2014-312: Through collaboration with other FP projects, and CRPs

Activity 2014-318: Through collaboration with other FP projects, and CRPs

Activity 2014-322: Through collaboration with other FP projects, and CRPs, bilateral projects (esp. SIMLESA)

Activity 2014-324: Through collaboration with other FP projects, and CRPs, bilateral Projects (esp. SIMLESA)

Activity 2014-397: Extensive linkages to aligned projects within CIMMYT and collaborating partners, CRPs, etc.

Collaborating with other CRPs

Maize
Description of collaboration: Development of Institutional Innovations, especially based on the Agricultural Innovation Platform approach.
The achieved outcome contributions: <Not defined>

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4.4 Outcome case studies

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

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
<p>FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 4: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 1: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 2: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>

Major Output groups - 2014

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FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG

<Not defined>

Brief summary of your actual 2014 contribution towards the selected MOG:

<Not defined>

Brief 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>

FP1 - MOG # 4: 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 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>

FP1 - MOG # 1: 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 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>

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FP1 - MOG # 2: 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 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>

Major Output groups - 2015

FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

- i) Working closely with CCAFS EA, especially in CSV to test CSA technologies and further pre-PEACSA work
- ii) Formation of AIP in Wote - initiated with 7 farmer groups (hosting CSA trials) - establishment in 2016
- iii) Enhancing the role of agri-business in scaling CSA - (CCAFS working paper <https://cgspace.cgiar.org/rest/bitstreams/60041/retrieve>)

Brief 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:

Bullet ii. above

This is work in progress - an inclusive AIP is scheduled to be established in Wote in mid 2016

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FP1 - MOG # 4: 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:

This is done through the partner project SIMLESA:

- i) In Tanzania, a participatory content development programme for sms has been rolled out
- ii) In 2016, three more activities are planned in new sites, including in one CCAFS site

Brief 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:

- i) ongoing follow up studies in three sites of AGMARK's work show out of the 1,500,000 scaling materials distributed, 30% reached women-led households
- ii) All PEACSA research activities have prioritised gender desegregation - focus group discussions, farmer field days and farm typology work

FP1 - MOG # 1: 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:

CSA options:

- i) Crop diversification. Cassava [drought, mosaic-tolerant varieties, lower soil fertility(?)] - IITA lines
- ii) Drought-tolerant (DT) maize (CIMMYT)
- iii) DT/rust-tolerant common bean (CIAT)
- iv) Low moisture tolerant Pigeon pea (ICRISAT)
- v) Grain storage (CIMMYT)
- vi) Push and pull (ICIPE)
- vii) Forage (bracharia) (ICIPE/CIAT)
- viii) Soil fertility management (CIAT)

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

<Not defined>

Summary of the gender and social inclusion dimension of the 2015 outputs:

The 2015 season is only concluding. We're harvesting CSA trials, end-of-season participatory evaluations NOW happening in all sites

- i) Gender desegregated data are being collected/analysed
- ii) All field events (on-farm/on-station) have ensured gender/ social inclusion (reports being processed)
- iii) Linkages (SIMLESA) have provided extra funds leverage for social inclusion (AIP)

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FP1 - MOG # 2: 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:

Customised decision support tools for CSA prioritisation (used in guiding field testing for local adaptation) (PEACSA Activity 3) - achieved. See reports

Brief 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:

Data were gender desegregated in the preceding activity (3)

Major Output groups - 2016

FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

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

1. Agricultural Innovation Platforms in three sites established, functioning to align key actor efforts to support the application of CSA portfolios tested by the project
2. Supporting, through partnerships with other projects, CCAFS EA, local partners in CSVs to test new CSA practices for enhanced adaptive capacity and resilience

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

Gender targets in participation will be achieved through Agricultural Innovation Platforms (AIP). AIPs are planned as vehicles to identify and apply business niche identification that target women, youth and marginalised capacities for sustainable intensification.

FP1 - MOG # 4: 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

1. AIP (explained in FP 1 - MOG #3)
2. Building on lessons from AGMARK Partnership outcomes, and through SIMLESA, dissemination tools will be improved to reach more farmers beyond current project sites including through extension services, more than 2000 agro-dealers project countries, devolved governments, private sector, academia (e.g. Makerere)

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

As explained in FP 1 - MOG #3 above

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FP1 - MOG # 1: 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

1. Push and pull technology 2. Drought tolerant Maize, legumes (common bean, pigeon pea, etc.) and cassava 3. post harvest loss reduction - grain storage technologies 4. CA 5. Forage varieties (developed at CIAT)

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

Target at least 25% participation of women in field CSAP testing, and support of gender sensitive business models through AIP approach (for scaling CSAPs).

FP1 - MOG # 2: 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

1. Business based partnerships (based on AIP) to engage private sector e.g. to disseminate CSA materials, grain storage bags, etc
2. Innovative CSA prioritization, led by CIAT in 2015, lessons further refined and applied in 2016 through participatory testing for wide scale adoption, local adaptation, and sharing.

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

Gender is a key factor in the partnerships being set up, including targeted dissemination of CSAPs. The 2015 CSA prioritization factored in gender and social inclusion as a key determining factor.

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: i) PEACSA is heavily dependent on seasonal cycles. And full lessons will only be ready after March 2016.

ii) full range of lessons, outputs need second round (2016) CSA evaluations, which instead are being scaled down given funding cuts

iii) 2016 was scheduled for major activities, building on 2015 foundation. For instance, we've:

- a) done background work to initiate AIP in sites
- b) built PEACSA actor network, including private sector (insurance), NGOs, NARS, etc.
- c) new projects are expected to join the CSA work, based on PEACSA leadership

Therefore

iv) the expected loss of momentum will be detrimental

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5.2 Deliverables

Deliverable #1

Main Information	
Title: A synthesis report on farm household and farming system typology: objective, structure, components and methodology	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: Field data collection, done. Data are being analysed for detailed publication. A summary report was prepared to guide on-going objective 4 and 5 activities - see attachment

Next-user
Researchers in Activities No.1-5
Knowledge, attitude, skills and practice changes expected in next-user: Improved knowledge on underlying key components and characteristics of farm household and farming system typology. Enhanced skills to incorporate farm household and farming system typology into the design of Activity No.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The report will be made available and discussed with researchers from Activities No. 1-5 to guide their activities and deliverables.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Submitted on 2016-03-03 at 16:04 UTC

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
<p>Description: The first phase of the activity 1 “Capturing the diversity of maize-bean-cassava-livestock small holder systems and developing farm household typologies for targeting CSAP’s portfolios” consisted in focus group discussions with farmers from the CCAFS sites led by CIMMYT in three sites: Wote (Kenya), Lushoto (Tanzania) and Rakai (Uganda). The preliminary outputs were a selection of variables created and selected by farmers in gender differentiated groups. Farmers were asked to identify the four most important variables that can be used to classify their community of farmers. For each variable, farm /household types were given, with characteristics for each as well as information on the cropping/livestock system and /or the management of these farms. Finally, farmers indicated the proportion of each type in their community. Four groups (two women and two men groups) participated in this activity in each site, for a total of 16 FGD. The results were then analyzed to produce a typology of farmer household for each site. Per site, variables across the four groups were compared to find similarities or differences. In all three site three types of farms were described. These results are described below.</p> <p>These results will lead the sampling strategy for activity 3. We will sample 3 villages per CCAFS site. In each village one farm of each group be sampled thus 3 farms per village, a total of 9 farms per CCAFS site. We will conduct HH surveys with the selected farmers. Data collected will be used for modelling case study farms with the model FarmDESIGN. The baselines will be modelled first. Scenarios will be modelled later on including CSA portofolio according to the results of Module 3 CSA selection and prioritization from these past FGD.</p>
Creator / Authors: Celine Birnholz
Author Identifier: CIAT-Nairobi
Publication / Creation date: Aug 5, 2015
Language: English
Coverage: PEACSA Sites

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #2

Main Information
Title: A synthesis of existing farm household and livelihood data necessary for targeting CSAPs

Submitted on 2016-03-03 at 16:04 UTC

MOG # 2: 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)

Main Type: Data and information outputs, including datasets, databases and models

Sub Type: Data

Year of expected completion: 2015

Status: Complete

Next-user

Researchers in Activity No.1-5

Knowledge, attitude, skills and practice changes expected in next-user: Systematic inventory and descriptive information of key farm household and livelihood characteristics available from existing data provided by CCAFS EA allow the identification of feasible data capacity to develop and perform respective analyses for each Activity 1 through 5.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available and discussed with researchers from Activities No.1-5 to guide their activities and deliverables.

Partners contributing to this deliverable

Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	2
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	4

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: Descriptive Table

Submitted on 2016-03-03 at 16:04 UTC

Creator / Authors: Songporne
Author Identifier: Formerly CIMMYT
Publication / Creation date: August 26, 2015
Language: English
Coverage: Literature Review

Deliverable Data sharing
Activity 678-9 - FHH Variable Gap Identification.xlsx

Deliverable #3

Main Information	
Title: A synthesis of existing farm household and livelihood data necessary for targeting project CSAPs	
MOG # 2: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2015	
Status: Complete	

Next-user
Researchers in Activity No.1-5
Knowledge, attitude, skills and practice changes expected in next-user: Systematic inventory and descriptive information of key farm household and livelihood characteristics available from existing data provided by project partners allow the identification of feasible data capacity to perform respective analyses for each Activity 1 through 5.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available and discussed with researchers from Activities No. 1-5 to guide their activities and deliverables.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Submitted on 2016-03-03 at 16:04 UTC

Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: 3 Tables, and an Appendix
Creator / Authors: CIAT
Author Identifier: CIAT
Publication / Creation date: 2015
Language: English
Coverage: PEACSA Sites

Deliverable Data sharing
Activity 680 - CSAP list - Rakai.docx
Activity 680 - CSAP list - Wote.docx
Activity 680 - PEACSA cross-site soil analysis.docx
Activity 680 - CSAP list - Lushoto.docx

Deliverable #4

Main Information
Title: Data gaps identified and additional data gathering strategies/activities developed with relevant partners

Submitted on 2016-03-03 at 16:04 UTC

MOG # 2: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	

Next-user
Researchers in Activity No. 1
Knowledge, attitude, skills and practice changes expected in next-user: 1) Comparison of data requirements (Deliverable 1) and available data (Deliverable 2 & 3) shows gaps in knowledge (data) necessary to perform typology analysis. 2) Improved skills in household, and community-level collection of farm household and farming system data in diverse local environments through practical guidelines provided by relevant partners.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The data collection tools will be made available on an open access online repository (e.g. DataVerse). The tools may also be used for other project partners to guide their project activities.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

Submitted on 2016-03-03 at 16:04 UTC

Description: Literature review summary table
Creator / Authors: Songporne
Author Identifier: Formerly CIMMYT
Publication / Creation date: June 2015
Language: English
Coverage: Literature Review

Deliverable Data sharing
Activity 678, 681 - FHH Variable Gap Identification.xlsx

Deliverable #5

Main Information	
Title: Maps and narratives indicating spatial and temporal distribution of climate risks, biophysical and socioeconomic vulnerabilities	
MOG # 2: 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)	
Main Type: Tools and Computer Software	Sub Type: Maps
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: See report. This involves several steps.

Next-user
Activities #3 and 4, and bilateral partner projects (SIMLESA, PABRA, N2Africa)
Knowledge, attitude, skills and practice changes expected in next-user: Clear understanding of past and future climate risks and easy tracing of vulnerable sites and communities for targeting
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Working with project partners involved in the activity and with bilateral projects through periodic meetings and reviews.

Partners contributing to this deliverable
Partner #1 (Responsible): Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Submitted on 2016-03-03 at 16:04 UTC

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Restricted Use Agreement - Restricted access
Restricted access until:
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: Draft Report - with maps
Creator / Authors: Kindie Tesfaye
Author Identifier: CIMMYT
Publication / Creation date: Dec 2015
Language: English
Coverage: PEACSA Sites

Deliverable Data sharing
PEACSA _Activity 2_Feb2016_Kindie.docx

Deliverable #6

Main Information	
Title: Report on current vulnerabilities and risks for Wote, Lushoto and Rakai describing their social distribution	
MOG # 2: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report

Submitted on 2016-03-03 at 16:04 UTC

Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: As explained under Activity 690

Next-user
Activities #3 and 4, and bilateral partner projects (SIMLESA, PABRA, N2Africa)
Knowledge, attitude, skills and practice changes expected in next-user: Clear understanding of past and future climate risks and easy tracing of vulnerable sites and communities for targeting
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Working with project partners involved in the activity and with bilateral projects through periodic meetings and reviews.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Restricted Use Agreement - Restricted access
Restricted access until:
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: As explained under Activity 690
Creator / Authors: Kindie Tesfaye
Author Identifier: CIMMYT

Submitted on 2016-03-03 at 16:04 UTC

Publication / Creation date: Dec 2015
Language: English
Coverage: PEACSA Sites

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #7

Main Information
Title: Modelling framework for mapping future risks to advise year 2 activities
MOG # 2: 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)
Main Type: Reports, Reference Materials and Other Papers Sub Type: Working paper
Year of expected completion: 2016
Status: <Not defined>

Next-user
Activities #3 and 4, and bilateral partner projects (SIMLESA, PABRA, N2Africa)
Knowledge, attitude, skills and practice changes expected in next-user: Clear understanding of past and future climate risks and easy tracing of vulnerable sites and communities for targeting
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Working with project partners involved in the activity and with bilateral projects through periodic meetings and reviews.

Partners contributing to this deliverable
Partner #1 (Responsible): Sommer, Rolf <r.sommer@cgiar.org>, CIAT - Centro Internacional de Agricultura Tropical

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>

Submitted on 2016-03-03 at 16:04 UTC

What is your personal perspective of the importance of this product	<Not defined>
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Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #8

Main Information	
Title: Impact assessment workshop to develop methods, select criteria and metrics of CSAP evaluation	
MOG # 1: 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)	
Main Type: Workshops	Sub Type: Workshop
Year of expected completion: 2015	
Status: Complete	

Next-user
Crop-livestock farmers in the selected regions. Project partners. Activity 4

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Knowledge refined on how to evaluate the performance of CSAP. More holistic view of sustainable intensification by inclusion of principles of CSA.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The methods, evaluation criteria and metrics will be developed together with activity-4 stakeholders (= next users). This process will be documented, and shared online, in journal papers, newsletters, briefs, or conferences. Synergy through linkages with Bilateral projects for scaling-out CSAPs, and with key development initiatives.

Partners contributing to this deliverable

Partner #1 (Responsible): De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Partner #2: Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: Findings/ outcome Table

Creator / Authors: M. Misiko

Author Identifier: CIMMYT

Publication / Creation date: June 2015

Language: English

Coverage: PEACSA Sites

Submitted on 2016-03-03 at 16:04 UTC

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #9

Main Information
Title: First set of CSAP identified and prioritised for evaluation using participatory approaches and modelling
MOG # 1: 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)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Research report
Year of expected completion: 2015
Status: Complete

Next-user
Crop-livestock farmers in the selected regions. Project partners. Activity 4
Knowledge, attitude, skills and practice changes expected in next-user: Knowledge refined on which CSAP perform best in relation to multiple objectives (metrics) in the targeted sites.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Project meetings, field participatory processes, documented, and shared online, in journal papers, newsletters, briefs, conferences, etc.
Synergy through linkages with CCAFS Flagship 1.3 partnerships for scaling-out CSAPs with the NEPAD-INGO Africa CSA Alliance will be critical.

Partners contributing to this deliverable
Partner #1 (Responsible): Sommer, Rolf <r.sommer@cgiar.org>, CIAT - Centro Internacional de Agricultura Tropical

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Submitted on 2016-03-03 at 16:04 UTC

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: See Activity 680
Creator / Authors: Rolf Sommer
Author Identifier: CIAT
Publication / Creation date: June 2015
Language: English
Coverage: PEACSA Sites

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #10

Main Information	
Title: CSAP prioritization and evaluation completed and used for initiating reality testing of best-bet CSAPs	
MOG # 1: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2016	
Status: <Not defined>	
Next-user	
Activity 4 researchers. Project partners: public extension, NGOs active in the targeted sites	

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Knowledge refined on which CSAP perform best in relation to multiple objectives (metrics) in the targeted sites. More holistic view of sustainable intensification by inclusion of principles of CSA.

CSAP combinations, and sets of matching information for field researchers, knowledge intermediaries and farmers.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Continuous interaction with activity-4 will enable co-ownership of the evaluation process, and resultant CSAP options among partners and farmers. By integrating endogenous adaptation practices, a co-production of information and knowledge will foster co-learning and ownership. This process will be documented, and shared online, in journal papers, newsletters, briefs, conferences, etc.

Partners contributing to this deliverable

Partner #1 (Responsible): Sommer, Rolf <r.sommer@cgiar.org>, CIAT - Centro Internacional de Agricultura Tropical

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>

License adopted: <Not defined>

Dissemination Channel: <Not defined>

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #11

Main Information	
Title: Data on different institutional and socioeconomic contexts necessary for effective targeting of CSAP	
MOG # 2: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: data being analysed

Next-user
Project partners, and NARIs (KALRO, NARO, SARI)
Knowledge, attitude, skills and practice changes expected in next-user: CSAP combinations, and sets of matching information for partners and NARIs
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> - Co-planning will enable co-ownership of the evaluation process, and resultant CSAPs among partners and NARIs - By integrating endogenous adaptation practices, a co-production of information and knowledge will foster co-learning and ownership. - This process will be documented, and shared online - open access data.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Submitted on 2016-03-03 at 16:04 UTC

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: Data were gathered as part of the Project Baseline. Further field studies are planned for first quarter of 2016, especially institutional analyses in three sites of Lushoto, Rakai and Wote
Creator / Authors: M. Misiko
Author Identifier: CIMMYT
Publication / Creation date: 2016
Language: English
Coverage: PEACSA Sites

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #12

Main Information
Title: Social science and Agronomic protocols, and partnerships for field evaluations of CSAP options
MOG # 1: 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)
Main Type: Tools and Computer Software
Sub Type: Tools
Year of expected completion: 2015
Status: Complete
Next-user
Project partners, and NARIs (KALRO, NARO, SARI)

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Project partners and NARIs have new knowledge or in-depth understanding of CSAP combinations and protocols for enhanced field testing and packaging

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:

- Co-planning will enable co-ownership of the evaluation process, and resultant CSAP among partners and NARIs
- By integrating endogenous adaptation practices, a co-production of information and knowledge will foster co-learning and ownership.
- This process will be documented, and shared online - open access data.

Partners contributing to this deliverable

Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: Tools

Creator / Authors: M. Misiko

Author Identifier: CIMMYT

Publication / Creation date: April 2015

Language: English

Coverage: PEACSA Sites

Deliverable Data sharing

Submitted on 2016-03-03 at 16:04 UTC

[PEACSA_FGD_May 25_Final.docx](#)[Copy of Module 3.xlsx](#)[Activity 699 - REVISED RAKAI PLOT LAYOUT AND TREATMENT DESCRIPTION.xlsx](#)[Activity 699 - Wote, Rakai Randomization and field layout.xlsx](#)**Deliverable #13**

Main Information	
Title: Communication strategies decided, forms of materials for scaling, combinations of scaling methods agreed, partnerships agreed	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Communication Products and Multimedia	Sub Type: Social media outputs
Year of expected completion: 2015	
Status: Complete	

Next-user
Project partners: World Vision and CRS, National NGOs (CIDI, EFA, AGMARK), NARIs (KALRO, NARO, SARI)
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge, wider sharing and application of lessons from dissemination materials and approaches
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Through project meetings and workshops with the partners and CCAFS EA to share the communication strategy and have feedback

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Submitted on 2016-03-03 at 16:04 UTC

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: Communication strategy - being developed for SIMLESA too
Creator / Authors: M. Misiko
Author Identifier: CIMMYT
Publication / Creation date: Dec 2015
Language: English
Coverage: PEACSA Sites

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #14

Main Information
Title: Open-access database on farm household and farming system characteristics across/within locations containing primary information gathered.
MOG # 2: 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)
Main Type: Data and information outputs, including datasets, databases and models
Sub Type: Data
Year of expected completion: 2016
Status: <Not defined>

Next-user #1
Researchers in Activity No.1

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Comprehensive knowledge (data) on farm household and farming systems generated to perform the typology analysis.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available (open access) on an online repository to be hosted by CIMMYT/CAAFS.

Next-user #2

Researchers in Activity No. 2-5

Knowledge, attitude, skills and practice changes expected in next-user: Other project team (Act No. 2 through 5) will be able to develop their activities for coherent and harmonized groups of farm household with similar structural and functional characteristics.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available (open access) on an online repository to be hosted by CIMMYT/CAAFS.

Next-user #3

CRP7 and other CG researchers

Knowledge, attitude, skills and practice changes expected in next-user: Partner projects undertaking similar work of scaling CSA in the same or similar socio-ecological sites have new knowledge on farm household and farming system typologies in order to engage in systems perspective and improve targeting of their activities.

Detailed characteristics of farm household typologies will allow scaling of CSA Portfolios

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available (open access) on an online repository to be hosted by CIMMYT/CAAFS.

Partners contributing to this deliverable

Partner #1 (Responsible): Tongruksawattana, Songporne <s.tongruksawattana@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>

Submitted on 2016-03-03 at 16:04 UTC

License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #15

Main Information
Title: Structural and functional farm household and farming systems typologies will be developed across/within sites.
MOG # 2: 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)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Research report
Year of expected completion: 2016
Status: <Not defined>

Next-user #1
Researchers in Activities No. 2-5
Knowledge, attitude, skills and practice changes expected in next-user: New knowledge on detailed characteristics of diversity and similarity of farm household and farming systems provide guideline for activities No. 2 through 5 to target evaluation and scaling of CSAP more effectively.

Submitted on 2016-03-03 at 16:04 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Reports on farm households and farming systems diversity across and within sites, as well as main methodological learnings and resulting guidelines, will be made available to relevant partners.

Next-user #2

Bilateral projects (SIMLESA, PABRA, N2AFRICA), CRP7 and CG researchers

Knowledge, attitude, skills and practice changes expected in next-user: New knowledge on detailed characteristics of diversity and similarity of farm household and farming systems provide guideline to target innovation, evaluation, dissemination, and scaling of CSAP in similar socio-ecological sites more effectively.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Reports on farm households and farming systems diversity across and within sites, as well as main methodological learnings and resulting guidelines, will be made available to relevant partners.

Next-user #3

NARIs (KALRO - Kenya, SARI - Tanzania, NARO - Uganda)

Knowledge, attitude, skills and practice changes expected in next-user: New knowledge on detailed characteristics of diversity and similarity of farm household and farming systems provide guideline to target innovation, evaluation, dissemination, and scaling of CSAP in similar socio-ecological sites more effectively.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Reports on farm households and farming systems diversity across and within sites, as well as main methodological learnings and resulting guidelines, will be made available to relevant partners.

Partners contributing to this deliverable

Partner #1 (Responsible): Tongruksawattana, Songporne <s.tongruksawattana@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>

License adopted: <Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Dissemination Channel: <Not defined>**Dissemination URL:** [<Not defined>](#)**Deliverable Metadata****Description:** <Not defined>**Creator / Authors:** <Not defined>**Author Identifier:** <Not defined>**Publication / Creation date:** <Not defined>**Language:** <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing****Deliverable files**

<Not defined>

Deliverable #16**Main Information****Title:** A brief on empirical methodologies for capturing the diversity of farming systems.**MOG # 2:** 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)**Main Type:** Reports, Reference Materials and Other Papers**Sub Type:** Discussion paper**Year of expected completion:** 2016**Status:** <Not defined>**Next-user**

Project partners, CRP7, CRP Maize, CG researchers and public research forum

Knowledge, attitude, skills and practice changes expected in next-user: Empirical assessment of methodology on farm household and farming system typology provide guideline to apply similar approach in relevant context.**Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:** The discussion paper will be made available on an open access online repository to be hosted by CIMMYT/CAFS.

Submitted on 2016-03-03 at 16:04 UTC

Partners contributing to this deliverable

Partner #1 (Responsible): Tongruksawattana, Songporne <s.tongruksawattana@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

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Deliverable Data sharing

Deliverable files <Not defined>

Deliverable #17

Main Information

Title: Peer review scientific publications on structural and functional typologies of households and farming systems

Submitted on 2016-03-03 at 16:04 UTC

MOG # 1: 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)

Main Type: Peer reviewed Publications

Sub Type: Peer-reviewed journal articles

Year of expected completion: 2017

Status: <Not defined>

Next-user #1

CRP7, CRP Maize, bilateral projects (SIMLESA, PABRA, N2AFRICA)

Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge among project partners and CRPs on the diversity of farm households and farming systems and the need to capture such diversity in targeting CSAP's.

Researchers and project partners will have practical and methodological elements to understand farm households and farming systems diversity for up/out scale CSAPs.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Articles will be published in open-access journals as well as widely shared among partners on different platforms (e.g. CCAFS websites).

Next-user #2

CG researchers and public research forum

Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge among research community on the diversity of farm households and farming systems and the need to capture such diversity in targeting CSAP's.

Researchers and project partners will have practical and methodological elements to understand farm households and farming systems diversity for up/out scale CSAPs.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Articles will be published in open-access journals as well as widely shared among partners on different platforms (e.g. CCAFS websites).

Partners contributing to this deliverable

Partner #1 (Responsible): Tongruksawattana, Songporne <s.tongruksawattana@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #18

Main Information
Title: Policy brief based on scientific publication on the typologies across and within sites published.
MOG # 4: 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)
Main Type: Reports, Reference Materials and Other Papers Sub Type: Policy briefs - Briefing paper
Year of expected completion: 2018
Status: <Not defined>

Next-user
Policy makers and high level development institutions (CRS, World Vision, AGMARK, EFA and CIDI)

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge among policy makers and project partners on the diversity of farm households and farming systems and the need to capture such diversity in targeting CSAPs for policy formulation and development strategies

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Research results and policy briefs will be discussed in round table discussions with policy makers, in project workshops/ meetings with partners, and widely shared online.

Partners contributing to this deliverable

Partner #1 (Responsible): Tongruksawattana, Songporne <s.tongruksawattana@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

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Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Deliverable #19

Main Information	
Title: Potential domains for targeting CSAP portfolios.	
MOG # 2: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2016	
Status: <Not defined>	

Next-user
Activities # 4 and bilateral partner projects (including SIMLESA), and national partners (KALRO, SARI, NARO).
Knowledge, attitude, skills and practice changes expected in next-user: Domains developed by matching biophysical and socioeconomic vulnerabilities with CSAPs will guide evaluation and formulation of climate smart recommendations.
They start to plan for future risks rather than only current. The research team has a stronger grounding in the realities of local practice and social organization.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Continue with the co-learning paradigm.
Two partner engagement workshops, research outputs briefs and brochures, and publications

Partners contributing to this deliverable
Partner #1 (Responsible): Sommer, Rolf <r.sommer@cgiar.org>, CIAT - Centro Internacional de Agricultura Tropical

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #20

Main Information
Title: Method for assessing social distribution of future climate risks in collaboration with modellers
MOG # 2: 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)
Main Type: Tools and Computer Software
Sub Type: Tools
Year of expected completion: 2016
Status: <Not defined>

Next-user
Activities # 4.

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Domains developed by matching biophysical and socioeconomic vulnerabilities with CSAPs will guide evaluation and formulation of climate smart recommendations.

Scientists involved in Activity 4 start emphasizing planning for future risks rather than only current. The research team has a stronger grounding in the realities of local practice and social organization.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Continue with the co-learning paradigm.

Project meetings and research activities.

Using this information to plan for adaptation (especially through CSAP).

Partners contributing to this deliverable

Partner #1 (Responsible): Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

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Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Submitted on 2016-03-03 at 16:04 UTC

Deliverable files

<Not defined>

Deliverable #21

Main Information	
Title: Feedback from activity 4 used to optimise CSAP selection and refine impact assessment	
MOG # 1: 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)	
Main Type: Workshops	Sub Type: Workshop
Year of expected completion: 2017	
Status: <Not defined>	

Next-user
Activity 4 researchers. Project partners. Public and private extension (in Kenya: CRS, EFA, AGMARK; Uganda: CRS, CIDI; Tanzania: CRS))
Knowledge, attitude, skills and practice changes expected in next-user: CSAP combinations, and sets of matching information for field researchers, knowledge intermediaries and farmers.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Participatory planning, integrating of endogenous adaptation practices, and sharing online.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
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Dissemination Channel: <Not defined>**Dissemination URL:** [<Not defined>](#)**Deliverable Metadata****Description:** <Not defined>**Creator / Authors:** <Not defined>**Author Identifier:** <Not defined>**Publication / Creation date:** <Not defined>**Language:** <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing****Deliverable files**

<Not defined>

Deliverable #22**Main Information****Title:** A "hands-on" tools training workshop held for key development initiatives (in collaboration with activity 5)**MOG # 4:** 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)**Main Type:** Workshops**Sub Type:** Workshop**Year of expected completion:** 2017**Status:** <Not defined>**Next-user**

Activity 4 researchers. Project partners: public extension, private sector (farm supply businesses), NGOs

Knowledge, attitude, skills and practice changes expected in next-user: CSAP combinations, and sets of matching information for field scaling partners, researchers, other knowledge intermediaries and farmers.

Submitted on 2016-03-03 at 16:04 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Workshop participants will be asked to apply the various tools for evaluating CSAPs using their own practical examples. The workshop will build capacity and motivation of the next users to utilize the framework of tools, methods and metrics in a holistic manner.

Partners contributing to this deliverable

Partner #1 (Responsible): De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

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Deliverable #23

Main Information	
Title: CSAP potentials for scaling out assessed and communicated with partners from key development initiatives	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2018	
Status: <Not defined>	

Next-user
Project partners, NGOs (e.g. CRS), national agri development programmes, key IARCs partners, National Agricultural Research Institutions and Ministries of Agriculture
Knowledge, attitude, skills and practice changes expected in next-user: Next users have the information and lessons about best-bet CSAPs and use them in their decision making processes.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Inclusion of the key development initiative representative in the planning process and annual project workshops will enable co-ownership of the evaluation process, resultant tools, and selected CSAPs and their potential. Documenting and sharing online.

Partners contributing to this deliverable
Partner #1 (Responsible): De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
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License adopted: <Not defined>
Dissemination Channel: <Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Dissemination URL: [<Not defined>](#)**Deliverable Metadata****Description:** <Not defined>**Creator / Authors:** <Not defined>**Author Identifier:** <Not defined>**Publication / Creation date:** <Not defined>**Language:** <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing****Deliverable files**
<Not defined>**Deliverable #24****Main Information****Title:** Regional thematic maps (e.g. picturing the impact of CSAPs on productivity, income and livelihoods)**MOG # 1:** 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)**Main Type:** Tools and Computer Software**Sub Type:** Maps**Year of expected completion:** 2018**Status:** <Not defined>**Next-user**

Project partners, NGOs, extension services, NARIS and ARI scientists interested in CSAP identification/evaluation and mapping

Knowledge, attitude, skills and practice changes expected in next-user: Thematic maps will improve the user-friendliness ("digestibility") of the research outputs and thus facilitate understanding of site-specific challenges and opportunities, increasing the likelihood of CSAP adoption.**Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:** Targeted dissemination of maps to stakeholders; publication online and open access to underlying data sets.

Submitted on 2016-03-03 at 16:04 UTC

Partners contributing to this deliverable

Partner #1 (Responsible): Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

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License adopted: <Not defined>
Dissemination Channel: <Not defined>
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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files <Not defined>

Deliverable #25

Main Information

Title: 1st set of evaluation data on CSA options

Submitted on 2016-03-03 at 16:04 UTC

MOG # 1: 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)

Main Type: Data and information outputs, including datasets, databases and models

Sub Type: Data

Year of expected completion: 2016

Status: <Not defined>

Next-user

Project partners and NARIs

Knowledge, attitude, skills and practice changes expected in next-user: As project partners and NARIs come to understand future climate risks, they initiate participatory field evaluation of CSA options.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: - Co-learning and co-production of knowledge to result in institutionalised CSAP options among partners
- Rigorous documentation, and sharing online.

Partners contributing to this deliverable

Partner #1 (Responsible): De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>

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Dissemination Channel: <Not defined>

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

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Creator / Authors: <Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #26

Main Information
Title: Social science, economic and Agronomic gender-disaggregated data from participatory evaluations of CSA options
MOG # 1: 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)
<div> Main Type: Data and information outputs, including datasets, databases and models </div> <div> Sub Type: Data </div>
Year of expected completion: 2017
Status: <Not defined>

Next-user
Project partners, key development partners (World Vision and CRS) and National NGOs (CIDI, AGMARK)
Knowledge, attitude, skills and practice changes expected in next-user: Sets of matching information for next users enable in-depth understanding for more appropriate packaging of CSA options
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Sharing online, in journal papers, newsletters, briefs, workshops, conferences, etc.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
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Dissemination URL: <Not defined>

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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #27

Main Information	
Title: Lessons for gender mainstreaming in CSAP among smallholders	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Capacity	Sub Type: Capacity
Year of expected completion: 2018	
Status: <Not defined>	

Submitted on 2016-03-03 at 16:04 UTC

Next-user
NGOs (CRS, CIDI, EFA, AGMARK), policy makers (4 Ministries of Agriculture, ASARECA), NARIs (KALRO, NARO, SARI), CBOs, local faith-based organizations
Knowledge, attitude, skills and practice changes expected in next-user: CSAP-related gender information (and lessons), and other sets of matching information are taken up, to include gender into CSAP scaling.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Sharing online, through scientific journals, newsletters, briefs, workshops, conferences and other dissemination mechanisms appropriate for identified next users.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

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Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #28

Main Information
Title: Best-bet CSAP options packaged and shared
MOG # 1: 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)
Main Type: Peer reviewed Publications
Sub Type: Peer-reviewed journal articles
Year of expected completion: 2018
Status: <Not defined>

Next-user
NGOs, policy makers (4 Ministries of Agriculture, ASARECA, COMESA), NARIs (KALRO, NARO, SARI), CBOs, local level faith based organisations
Knowledge, attitude, skills and practice changes expected in next-user: Best bet CSAP packages, including matching information are taken up by next users, to be applied in different mixed crop-livestock smallholder contexts.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Application of Agricultural Innovation Platforms (AIP), and innovative public-private partnerships for wide scaling out of CSAP options and scaling up of approaches.
Sharing through newsletters, conferences and other dissemination mechanisms appropriate for identified next users.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #29

Main Information	
Title: Full data on CSAP evaluations, lessons on participatory evaluation of CSAPs, application of knowledge/ partnerships	
MOG # 1: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2018	
Status: <Not defined>	

Next-user
Project partners. CRP projects. NGOs, policy makers (4 Ministries of Agriculture, ASARECA, COMESA), NARIs (KALRO, NARO, SARI), CBOs, faith-based organisations

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: CSAP combinations, and sets of matching information for field researchers, knowledge intermediaries and farmers.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Sharing online, in journal papers, newsletters, briefs, workshops, conferences, etc.

Partners contributing to this deliverable

Partner #1 (Responsible): De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
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Deliverable Metadata

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Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Deliverable #30

Main Information	
Title: First set of CSAP options established, and formulated as scaling materials	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2016	
Status: <Not defined>	

Next-user
Partner bilateral projects, project partners, CRPs, NARIs (KALRO, NARO, SARI), NGOs. Public extension, private sector, farmer organizations
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge, wider sharing and application of lessons from dissemination materials and approaches
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Through workshops involving the project partners and CCAFS EA to formulate scaling materials

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #31

Main Information
Title: Initial data/ lessons on participatory evaluation shared, including preferred CSAPs, potential application, etc.
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)
Main Type: Data and information outputs, including datasets, databases and models Sub Type: Data
Year of expected completion: 2016
Status: <Not defined>

Next-user
Partner bilateral projects, project partners, CRPs, FP projects, farmer organizations
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge, wider sharing and application of lessons from dissemination materials and approaches
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Through field participatory testing, project meetings and sharing of project materials

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Submitted on 2016-03-03 at 16:04 UTC

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #32

Main Information	
Title: The process of testing all options of CSAP in different sites documented and shared	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report

Submitted on 2016-03-03 at 16:04 UTC

Year of expected completion: 2017
Status: <Not defined>

Next-user
Activity 4. Project partners: NARIs (KALRO, NARO, SARI), CRS, World Vision, national NGOs. Public funded extension, private sector, farmer organizations
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge, wider sharing and application of lessons from dissemination materials and approaches
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Lessons documented and shared through AIP processes and partnerships, and innovative sharing mechanisms including round table discussions.

Partners contributing to this deliverable
Partner #1 (Responsible): De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #33

Main Information
Title: Partnership models tested/ applied for delivery of CSAP to different smallholder typologies (including marginalised groups)
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Research report
Year of expected completion: 2017
Status: <Not defined>

Next-user
Activity 4. Project partners: NARIs (KALRO, NARO, SARI), CRS, NGOs. Public funded extension, private sector, farmer organizations
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced/ innovative partnerships through AIP processes, based on bilateral projects' experiences.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Through partnerships based on AIP i.e. public-non-public-private partnerships (PnPPP), and in close collaboration with bilateral projects.
Critical role of bilateral projects, especially for lessons and complementary activities/ institutional support and goodwill.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #34

Main Information
Title: The full set of CSAP options prepared and shared
MOG # 1: 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)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Discussion paper
Year of expected completion: 2018
Status: <Not defined>
Next-user
NARIs (KALRO, NARO, SARI), CRS, NGOs. Extension, private sector, farmer organizations. CRPs, IARCs. ASARECA, national and regional policy institutions

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Enhanced understanding on CSAPs, their on field performance (including on gender-related lessons), and the site-specific best-bet options, which leads to promotion and application.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Through partnerships based on AIP i.e. public-non-public-private partnerships (PnPPP), and in close collaboration with bilateral projects, and through the application of the communication strategy developed by the project and support from CCAFS EA communications' team.

Partners contributing to this deliverable

Partner #1 (Responsible): De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Partner #2: Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Submitted on 2016-03-03 at 16:04 UTC

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #35

Main Information
Title: Lessons on participatory approaches systematized, applied and shared, with emphasis on gender and social inclusion
MOG # 4: 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)
Main Type: Peer reviewed Publications
Sub Type: Peer-reviewed journal articles
Year of expected completion: 2018
Status: <Not defined>

Next-user
NARIs (KALRO, NARO, SARI), CRS, NGOs. Public extension, private sector, farmer organizations. CRPs, IARCs. ASARECA, national and regional policy institutions
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge on participatory approaches that leads to social inclusion, including gender mainstreaming, and institutionalization of these approaches.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: CSAP sharing and institutionalization through innovative partnerships based on AIP i.e. public-non-public-private partnerships, with strong focus on social inclusion. The role of bilateral projects is also critical, especially for lessons and complementary activities/ institutional support and goodwill.

Partners contributing to this deliverable
Partner #1 (Responsible): Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>

Submitted on 2016-03-03 at 16:04 UTC

What is your personal perspective of the importance of this product	<Not defined>
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Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #36

Main Information	
Title: Targeting domains refined and publication	
MOG # 2: 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)	
Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2017	
Status: <Not defined>	
Next-user	
Project team and the community at large	

Submitted on 2016-03-03 at 16:04 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Outputs and experience shared through publication for up-scaling and out-scaling of CSAPs in the project countries and beyond.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Publication and communication

Partners contributing to this deliverable

Partner #1 (Responsible): Sommer, Rolf <r.sommer@cgiar.org>, CIAT - Centro Internacional de Agricultura Tropical

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Submitted on 2016-03-03 at 16:04 UTC

5.3 Summary on next-users

Next user #1
<p>Key next user for the current reporting period. Key game changers. Observed Knowledge, Attitude, Skills and practice changes:</p> <ul style="list-style-type: none"> i) Ministry of Agriculture - Extension (Ke, Tz, Ug) <ul style="list-style-type: none"> a) Facilitation of smallholder on-farm participation b) Adaptation of CSA message for local usage c) Hosting of on-station CSA evaluations ii) National Agricultural Research Institutes (KALRO - Ken, SARI - Tz, NARO - Ug) <ul style="list-style-type: none"> a) Adapting CSA evaluation plans during planning b) Co-evaluation of CSA portfolios ** Working with Makerere University in Ug iii) NGOs - several small organisations <ul style="list-style-type: none"> a) AGMARK - critical skills in marketing, and links with over 6000 agribusinesses in the region (Ke) (agmark.org) b) The Environmental Resources Management Center for Sustainable Development (ERMCSO) (Tz) (ermcsd.org/lushoto-project/) iv) Initiating closer ties with private sector: <ul style="list-style-type: none"> a) Agriculture and Climate Risk Enterprise Ltd. (ACRE) (acreafrica.com/) b) Grain storage (i.e. metal silos fabricating, and hermetic bags supply) entrepreneurs/ enterprises v) Local CBOs/ Cooperatives - support mechanisms (through SIMLESA) being initiated <ul style="list-style-type: none"> a) Collective action for marketing of produces, etc. b) Collective action for bulk input purchasing, or for input trading
<p>Strategies (facilitation, engagement, knowledge sharing etc.) you used to encourage and enable this next user to utilize deliverables and adopt changes:</p> <ul style="list-style-type: none"> i) Facilitation - PEACSA budget allocation for their operations ii) Engagement - regular email briefings, co-planning for field activities, meetings (field days, evaluations, etc.) iii) Knowledge sharing - planned trainings (needs based - through SIMLESA's planned Competitive Grant Scheme (CGS) (this is aimed at strengthening scaling out capacity)
<p>Reported deliverables serve as evidence towards this achieved change: Meeting notes - see attached docs.</p>
<p>Lessons and implications for the next planning cycle: Partnership building is about trust building, and only matures with time. The 2015 achievements are seen by PEACSA as foundational for next project activities.</p>

Submitted on 2016-03-03 at 16:04 UTC

5.4 Project highlights

6. Activities

Activity #1	
Title: Capturing the diversity of maize-bean-cassava-livestock smallholder systems and developing farm household typologies for targeting CSAPs	
Description: Effective targeting of CSAPs requires understanding and capturing the diversity of farm households and farming systems, characteristics, interrelationships and flows. Farm household typologies provide a systemic understanding of diversity among, and similarity within, coherent groups of farm households and their corresponding farming systems with different structural and functional characteristics. Typologies for the different locations of this project will identify groups of farm households based on farm structural features (including gender composition and socio-economic indicators) as well as on characteristics related to crop-livestock management systems, performances, and resulting productivity. In addition, perceived and actual vulnerability to climate risk and available adaptation strategies based on crop-livestock CSAP's will be integrated in the typology work.	
<p>Most efficient use of existing data and information (from on-farm trials) will be prioritised but primary information (from surveys, in-depth qualitative interviews and focus discussions) will need to be generated and shared.</p>	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	Justification: i) Diversity of farm households and farming systems, characteristics - field work complete. Data being processed ii) Farm household typologies - Tables being edited iii) Gaps being identified, and further research preferred See documents attached in the report.

Activity #2	
Title: Current and future climate risks/ vulnerabilities identified and mapped for refined, gender-response targeting of CSAPs	
Description: This activity will identify major climate related risks, and how these interact with farmers' biophysical and socioeconomic contexts that influence their capacity to cope. This will be largely achieved using previous work from CCAFS and other projects, including household survey data and results from climate change projections, agricultural, biophysical and bio-economic modelling. By understanding these complexities, we shall be able to situate the participatory process and target CSAP effectively.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	

Submitted on 2016-03-03 at 16:04 UTC

Status: On-going	<p>Justification: Finalising reports - draft available (attached in the system).</p> <p>We have delayed in this activity due to lack of complete weather data in Tz Lushoto and Ug Rakai</p>
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Activity #3

Title: Determine the potential scale and nature of impact of different CSAP portfolios	
<p>Description: This activity comprises a scientifically rigorous screening of the possibly suitable CSAPs and selection of a sub-set of portfolios that has the highest chances to perform in the given biophysical, institutional and socioeconomic context of each selected site. This will be done ex-ante by using CCAFS' CSA prioritization toolkit, and based on a participatory evaluation. The potential scale (community and households) as well as the impact of the selected CSAPs in regard to the three pillars sustainability, adaptation/resilience and mitigation, as well as their gender-sensitiveness will be determined by integrated modeling and trade-off analysis (e.g. using the point-scale crop model, CropSyst, the farm household model, FarmDesign, as well as the landscape scale model, LandscapelIMAGE). Results will be optimized iteratively by repeated integration of feedbacks from activity 4. Best-bet CSAP will be evaluated – "what is likely to perform?" – and ranked in terms of potentials for scaling out.</p>	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Sommer, Rolf <r.sommer@cgiar.org>, CIAT - Centro Internacional de Agricultura Tropical	
Status: Complete	

Activity #4

Title: Participatory evaluation of gender-responsive CSAP portfolios and formulation of recommendations for uptake and scaling	
<p>Description: Gender-responsive technology evaluation with farmers, public, non-government and private actors in Agricultural Innovation Platforms (AIP). Results from participatory analyses of CSAP use, adaptation and adoption will be analysed along with previous farmer preferences and findings from adoption surveys and combined with modelling to guide work under output 5. The target is to have CSAP options for scaling-out that meet different institutional and socioeconomic contexts.</p>	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: De Groote, Hugo <h.degroote@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	<p>Justification: i) First season of evaluations being completed. This cycle has to be repeated in 2016, before any lessons can be recorded.</p> <p>ii) AIPs are being initiated (as reported in preceding sections)</p>

Title: Communication strategies and tools co-developed and applied for wider use to scale CSAPs

Submitted on 2016-03-03 at 16:04 UTC

Description: This work is the culmination of output number 1-4. Public, non-government and private actors, will test a combination of suitable approaches to share CSAPs (among women and men farmer entities) and other beneficiaries. This process will be based on participatory evaluation of effectiveness of approaches for wider and inclusive reach. An effective M&E plan will be formulated to ensure efficient combination of strategies is developed. This activity will feed into the Flagship 1.3 project working with the Africa CSA Alliance, besides the partner projects.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	Justification: This is largely dependent on Activities 1-4. The different combinations of suitable approaches to share CSAPs can only be assessed after at least 2 full years of Activity 4, which anchors field scaling studies. This activity is also linked to SIMLESA. For instance the communication strategy is being co-authored with SIMLESA communication officer.

Activity #6

Title: (BILATERAL) Objective 4. SIMLESA: support the development of local/ regional innovations systems and scaling modalities	
Description: Objective 4. of SIMLESA (simlesa.cimmyt.org) is the core "activity" of the Project's Phase II. It has four outputs: --Output 4.1: Developed policy options and organizational models for the delivery of CA-based intensification options (also building on existing Innovation Platforms [IP]) --Output 4.2 Strengthened multi-stakeholder interaction mechanisms for uptake and scaling out of CA-based intensification options (incl. 15 innovation platforms and value chain interventions) --Output 4.3: CA-based intensification options scaled-out more widely through competitive and commissioned grants in each of the 5 countries --Output 4.4: Knowledge sharing of relevant program innovations (including sms, information decision guides, leaflets, etc.)	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 30-06-2018
Leader: Misiko, Michael <m.misiko@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	

Submitted on 2016-03-03 at 16:04 UTC

<p>Status: On-going</p>	<p>Justification: Complete:</p> <ul style="list-style-type: none"> i) Policy on organisational models - a ministerial level roundtable held in Uganda. It had high relevance for PEACSA - DTM maize seed, AIPs (see two briefs by M. Misiko) ii) AIPs - as reported in preceding sections, these are scheduled for 2016 establishment. Initiation work is ongoing iii) CGS - being rolled out in April 2016. This has far reaching (positive) implications for PEACSA as explained in preceding sections iv) An sms programme has been initiated in Ke and Tz. This is in collaboration with Queensland University (QAAFI), Australia
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Lessons regarding your project activities and possible implications for the coming planning cycle: High priority project among all Key Stakeholders. PEACSA (and CIMMYT) enjoys huge goodwill, and has functioned exceptionally well without a huge budgetary allocation to all the key non-CG partners. This goodwill must be kept at all cost!

Submitted on 2016-03-03 at 16:04 UTC

7. Leverages

Leverage #1	
Title: FAUSIK (expected) from DfID in 2016	
Partner name: CIMMYT - International Maize and Wheat Improvement Center - Mexico	
Year: 2015	
Flagship: FP1: Climate-smart practices	Budget: US \$300,000.00

Submitted on 2016-03-03 at 13:35 UTC

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

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

Project is working on

Flaship(s)	Region(s)
FP1: Climate-smart practices	RP SAs: South Asia

Bilateral project(s) contributing to this project
233 - ACIAR-SRFSI (Sustainable and resilient farming systems intensification for eastern Gangetic plains)-CIMMYT
234 - Cereal Systems Initiative for South Asia (CSISA)-CIMMYT
235 - ICAR-Conservation Agriculture-CIMMYT

Summary

CSAPs developed & validated under CCAFS and related projects have demonstrated improved productivity, resilience and adaptive capacity across agro-ecologies. However, the response and adoption of CSAPs varies with bio-physical and socio-economic diversity of farm households. The lack of integration of bio-physical and socio-economic knowledge in technology targeting limits adoption by diversity of farmers. Therefore, development and targeting portfolios of CSAPs within CSVs requires in-depth understanding of the diversity of farming practices on the adaptive capacity and food security. Evidence of CSAPs will be used for developing recommendation domains of CSAPs integrating diversity of bio-physical, socio-economic and political factors. Recommendation domains of potentially adoptable and gender responsive CSAPs will be validated employing key indicators (food security, economics, adaptive capacity, gender and social equity, mitigation). Analogues of potential CSAPs will be developed for scaling CSVs using evidence and linking outputs with CCAFS Flagships 1.2, 1.3, 4.1, other bilateral projects and national initiatives.

Submitted on 2016-03-03 at 13:35 UTC

2. Partners

Partner #1

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

Contacts

Type	Contact	Responsibilities and contributions
Partner	Whitbread, Anthony <a.whitbread@cgiar.org>	Contributing to the development of (a) CSAPs related to rainfed systems, (b) typologies and recommendation domains of CSAPs for rainfed systems, (c) models, and (d) cross cutting activities including gender, monitoring and evaluations, and capacity strengthening. . Major responsibilities include the implementation of the CSAPs portfolios and pilot CSVs in the Indian states of Karnataka and Andhra Pradesh. Activity 2014-251 *Partner*. Activity 2014-252 *Partner*. Activity 2014-253 *Partner*.

Partner #2

Institution: ILRI - International Livestock Research Institute

Contacts

Type	Contact	Responsibilities and contributions
Partner	Kumar, V Padmma <v.padmakumar@cgiar.org>	Contributing to the (a) development/identification of CSAPs for livestock based systems in the selected sites of Indian states of Bihar and Karnataka), (b) characterization of their domains, (c) validation of livestock based CSAPs within CSVs, (d) development of typologies and recommendation domains of CSAPs for scaling-up and out livestock based CSAPs, (e) information and data gathering related to livestock systems for typologies and recommendation domains and (f) cross cutting activities including gender, monitoring and evaluations, and capacity strengthening. Activity 2014-251 *Partner*. Activity 2014-252 *Partner*. Activity 2014-253 *Partner*. ILRI moved out of the project keeping on view of the fund cuts

Partner #3

Submitted on 2016-03-03 at 13:35 UTC

Institution: IRRI - International Rice Research Institute**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Lada, J K <j.k.ladha@irri.org>	Contributing to the development of (a) CSAPs related to rice based systems, (b) database/information system for development of typologies and recommendation domains, and (c) cross cutting activities including gender, monitoring and evaluations, and capacity strengthening. Major responsibilities include the implementation of the CSAPs portfolios and pilot CSVs in Odisha in India and Khulna in Bangladesh in collaboration with other partners, and contribute to the other locations. Activity 2014-251 *Partner*. Activity 2014-252 *Partner*. Activity 2014-253 *Partner*.

Partner #4 (Leader)**Institution:** CIMMYT - International Maize and Wheat Improvement Center**Contacts**

Type	Contact	Responsibilities and contributions
Project Leader	Jat, ML <m.jat@cgiar.org>	Activity 2014-251 *Leader*.
Partner	Mittal, Surabhi <s.mittal@cgiar.org>	Activity 2014-253 *Leader*.

Partner #5**Institution:** ICAR - Indian Council of Agricultural Research**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - India

Contacts

Type	Contact	Responsibilities and contributions
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Submitted on 2016-03-03 at 13:35 UTC

Partner	Sikka, A.K <aksikka@icar.org.in>	Contribute to the databases, information and capacity for the development of CSAPs portfolios, validation of CSAPs portfolios for diversity of farming systems within CSV sites (CCAFS and NICRA) across India. Facilitate stakeholder consultation and partnerships with NARES (ICAR Institutes, State Agriculture Universities, State Department of Agriculture) and leveraging resources through linking projects related to climate smart agriculture in India. Activity 2014-251 *Partner*. Activity 2014-252 *Partner*. Activity 2014-253 *Partner*.
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Partner #6**Institution:** NARC - Nepal Agricultural Research Council**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - India

Contacts

Type	Contact	Responsibilities and contributions
Partner	Bahadur , Dil <gurung_dilbahadur@yahoo.com>	Activity 2014-251 *Partner*. Activity 2014-252 *Partner*. Activity 2014-253 *Partner*. Activities not initiated in Nepal due to fund cust

Partner #7**Institution:** BARI - Bangladesh Agricultural Research Institute**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - India

Contacts

Type	Contact	Responsibilities and contributions
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Submitted on 2016-03-03 at 13:35 UTC

Partner	Director, Executive <dir-aic@barc.gov.bd>	<p>Contribute to the databases and information for the development of CSAPs portfolios, and validation of CSAPs portfolios for diversity of farming systems within CSV sites in Bangladesh. Facilitate stakeholder consultation in Bangladesh and leveraging resources through linking projects related to climate smart agriculture.</p> <p>Activity 2014-251 *Partner*. Activity 2014-252 *Partner*.</p> <p>Work initiated with BRRI and facilitated by IRRI as part of their responsibility</p>
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Partner #8

Institution: BARC - Bangladesh Agricultural Research Council

CCAFS Partner(s) allocating budget

CIMMYT - International Maize and Wheat Improvement Center - India

Contacts

Type	Contact	Responsibilities and contributions
Partner	Director, Executive <dir-aic@barc.gov.bd>	Activity 2014-253 *Partner*.

Partner #9

Institution: CIMMYT - International Maize and Wheat Improvement Center

Contacts

Type	Contact	Responsibilities and contributions
Partner	Lopez Ridauro, Santiago <s.l.ridauro@cgiar.org>	Activity 2014-252 *Leader*.

Partnerships overall performance over the last reporting period: This is a new flagship project started in 2015 itself with primarily new partners (IRRI, ICRISAT) and some new NARS. However, we have been working together with ICAR and SAUs since CCAFS phase I and they have played good role. The new partners have done good work but due to some uncertainties of funds and repeated cuts, there were some issues and accordingly the activities/deliverable were redesigned. Overall, the partnerships play a vital role in achieving

Submitted on 2016-03-03 at 13:35 UTC

outputs.

Lessons regarding your partnerships and possible implications for the coming reporting cycle: Working with diversity of partners across sites has been very fruitful in terms of capitalizing on vast expertise of multi-skill human resources and has been an excellent learning. But due to recent budget cuts we had to pull-apart few of them considering the deliverable priority and importance for overall project output.

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3. Locations

Project level	Latitude	Longitude	Name
Region	Not applicable	Not applicable	South Asia
Country	Not applicable	Not applicable	Bangladesh
Country	Not applicable	Not applicable	India
Province	Not applicable	Not applicable	Punjab
District	Not applicable	Not applicable	Ludhiana
District	Not applicable	Not applicable	Patiala
Province	Not applicable	Not applicable	Haryana
District	Not applicable	Not applicable	Karnal
Province	Not applicable	Not applicable	Bihar
District	Not applicable	Not applicable	Vaishali
District	Not applicable	Not applicable	Samastipur
Province	Not applicable	Not applicable	Andhra Pradesh
District	Not applicable	Not applicable	Anantpur
Province	Not applicable	Not applicable	Odisha
District	Not applicable	Not applicable	Puri
District	Not applicable	Not applicable	Bhadrak
Province	Not applicable	Not applicable	Karnataka
District	Not applicable	Not applicable	Khulna

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

The key objectives of project are to (a) develop and mainstream a framework fully validated for CSAP portfolios across diversity of farming system typologies, and (b) implement portfolios of targeted multi-commodity focused CSAPs through Climate Smart Villages. With increased capacity, attitude and skills of > 100 key decision-makers through generation, targeting and dissemination of evidence based knowledge of CSAP portfolios, the project will assist 0.5 million smallholder and low income men and women farmers in targeted regions to increase the productivity of irrigated and rainfed farming systems by 15% while reducing costs by 20% and environmental footprints by 10%.

Annual progress towards outcome (end of 2015): Through CCAFS enabled evidences and enhanced capacity of development organizations, the CSAPs are mainstreamed and at least one State government in India is using CCAFS-informed policy approaches and the Climate-Smart Village concept for upscaling climate-smart practices to more than 400 villages. At least two success stories of the CSA practices (involving marginalized and women farmers) from evidences in CSVs are documented which have large potential for scaling-out by the local and national Governments.

"FOR REPORTING IN AUG 2015: "At least one Indian State government is using CCAFS-informed approaches and the Climate-Smart Village concept for upscaling climate-smart practices to more than 400 villages"

Annual progress towards project outcome in the current reporting cycle (2015): 1. State government of Haryana, India is using CCAFS-informed policy approaches and the Climate-Smart Village concept for upscaling climate-smart practices wherein they have taken a policy decision for adoption of 500 climate smart villages.

2. Through CCAFS enabled evidence from 50 CSVs across IGP and enhanced capacity of development organizations, the CSAPs are mainstreamed.

3. Two success stories of the CSA practices (involving marginalized and women farmers) from evidences in CSVs are documented which have large potential for scaling-out by the local and sub-national Governments

Communication and engagement activities have contributed to achieving your Project outcomes: The strategic stakeholder engagement in developing, adapting and piloting CSA practices within CSV pilots and enhanced capacity and community awareness campaigns benefited in achieving the project outcome. Multi-stakeholder participatory research with community based approach focused on women and youth as well as key development department was the key for capacity development and raising awareness.

Evidence documents of progress towards outcomes: [DoA, Haryana letter.pdf](#)

Annual progress towards outcome (end of 2016): The CSAPs are further mainstreamed and at least one additional sub-national government is using CCAFS-informed approaches and the Climate-Smart Village concept for upscaling CSAPs to additional 100 villages. At

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least 1 additional success stories of the CSA practices (involving marginalized and women farmers) from evidences in CSVs are documented which have large potential for scaling-out by the local and national Governments

Annual progress towards outcome (end of 2017): To be defined in CCAFS phase-II

Annual progress towards outcome (end of 2018): To be defined in CCAFS Phase-II

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: The early evidence on CSAPs from CSVs through engaging whole range of stakeholders and communities to demonstrate as how the investments on CSA interventions vis-a-vis on business as usual can make a difference under the unexpected climate risks and hence higher return over investment and a long-term strategy for food security. This assumption came true in winter 2014-15 where large yield loss to continuous and untimely rains had affected the wheat productivity adversely under conventional practices but the quantum of loss was much lower in CSA which resulted in more investment and adoption of CSA during 2016 in NW India.

4.2 Contribution to CCAFS Outcomes

RP SAs - Outcome 2019: Governments, private sector and farmer organizations increase their investments and develop incentive mechanisms to promote wide scale adoption of improved climate-smart practices and technologies

Indicator #1: FP1 Indicator: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019	
Target value: 2	Cumulative target to date: 4
Target narrative: At least 2 initiative would lead to 500000 farmers adopting CCAFS informed CSAPs which are helping them to increase food production with 15% less cost and better adaptation to climatic risks	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

2015		
Target value: 1	Cumulative target to date: 1	Target achieved: 1.0

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2015	
Target narrative: At least 1 initiative would lead to 200000 farmers adopting CCAFS informed CSAPs which are helping them to increase food production with 15% less cost and better adaptation to climatic risks	
Narrative for your achieved targets, including evidence: At least 1 initiative would lead to at least 1,00,000 farmers adopting CCAFS informed CSAPs which are helping them to increase food production with 15% less cost and better adaptation to climatic risks	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: The project developed robust gender-responsive framework for targeting and implementing CSAPs within CSVs for increased adoption with involvement of at least 40% women and other socially differentiated groups in project activities through specific targeting, gender responsive capacity building and demonstrations of the CSAP portfolios. Provision of support for implementing participatory gender - responsive methodologies with farming households to promote gender-sensitive planning in relation to the selected CSAP portfolios.	

2016	
Target value: 1	Cumulative target to date: 2
Target narrative: At least 1 initiative would lead to 200000 farmers adopting CCAFS informed CSAPs which are helping them to increase food production with 15% less cost and better adaptation to climatic risks	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: The project will develop robust gender-responsive framework for targeting and implementing CSAPs within CSVs for increased adoption. The project will involve participation of at least 40% women and other socially-differentiated groups in project activities through specific targeting, gender-responsive capacity building and demonstrations of the CSAP portfolios. Provision of support for implementing participatory gender-responsive methodologies with farming households to promote gender-sensitive planning in relation to the selected CSAP portfolios.	

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		
Narrative for your achieved targets, including evidence: <Not defined>		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>		

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways

The evidence for CSAPs generated under FP 1 are being shared with FP 4.1 to catalyse the policy planners for prioritization investments on scaling CSAPs as a risk management strategies in view of the recent climate related risks.

Collaborating with other CRPs

Wheat
<p>Description of collaboration: The Sustainable Intensification Flagship of WHEAT CRP and CCAFS FP 1 activities are complementing each other and are co-developed in a participatory mode at some of the locations. The SI interventions developed are further validated from the lenses of CSA through documenting mitigation co-benefits of these SI interventions across ecologies.</p>
<p>The achieved outcome contributions: <Not defined></p>

4.4 Outcome case studies

Outcome case study #1
<p>Title: Climate-Smart Villages scaled out in Haryana, India</p>
<p>Outcome statement: In India, the State Government of Haryana has launched a program to pilot 500 climate smart villages in the rice-wheat systems districts of the state (https://ccafs.cgiar.org/blog/haryana-says-yes-more-climate-smart-villages#.Vbd8ufmqkqp;</p> <p>The program is being implemented by Department of Agriculture, Government of Haryana by integrating investments over a range of schemes for which the villages have already been identified through a planning workshop.</p>
<p>Research Outputs: Evidence from Climate-Smart Villages in CIMMYT-CCAFS's pilot sites, assessment and development of portfolio of CSA interventions in Climate-Smart Villages; climate smart agriculture interventions and farmers testimonials, capacity development of stakeholders and policy level dialogues. Peer reviewed publications in high impact Journals.</p>
<p>Research Partners: Key research partners includes national agricultural research organizations (ICAR, State Agriculture Universities), local governments-State Department of Agriculture, Govt of Haryana, farmer cooperatives, private sector partners (IKSL, Kisan Sanchar, Agriculture Insurance Company of India) and CGIAR centers (IFPRI).</p>
<p>Activities that contributed to the outcome:</p> <ul style="list-style-type: none"> Generated evidence from Climate-Smart Villages by validating and adapting portfolios of CSA practices and technologies for the predominant agricultural systems by CIMMYT, CCAFS South Asia and other CG centres in close collaboration with State Department of Agriculture, Government of Haryana, CCS Haryana Agricultural University, ICAR institutions (CSSRI), farmer organizations and private sector partners. CIMMYT-CCAFS provided knowledge, technological support and developed capacity and raised awareness to design and implement Climate-Smart Villages in Haryana.
<p>Non-research Partners: Department of Agriculture, Government of Haryana, Farmer cooperatives, service providers and private sector (machine manufacturers, small scale seed companies).</p>
<p>Output Users: Department of Agriculture, Government of Haryana; Kisan Sanchar, Farmer cooperatives and service providers</p>
<p>How the output was used: The Department of Agriculture, Government of Haryana, India has taken a policy decision to use the CSV approach of climate-smart agriculture practices portfolio, ICTs for agro-advisories, and technologies in 500 villages in the rice-wheat system dominated districts of the state.</p>
<p>Evidence of the outcome: Letter from the office of the Director General of Agriculture, Department of Agriculture, Government of Haryana regarding implementation of 500 CSVs. To achieve this, evidence of success of CSAPs and CSVs were shared with stakeholders including Government, policy planners through series of events on awareness creation, capacity development and media visits</p>

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

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

FP2 Indicator: Increase in research-informed demand-driven investments in climate services for agriculture and food security decision-making (millions)

FP2 Indicator: Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities

FP4 Indicator: # of regional/global organisations and processes that inform their equitable institutional investments in climate smart food systems using CCAFS outputs

FP1 Indicator: # of public-private actors at national and sub-national levels are using new incentive mechanisms or business models/ markets that explicitly promote climate smart approaches along the value chain, using CCAFS science

FP1 Indicator: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

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

Year: 2015

Annexes uploaded: [DoA, Haryana letter.pdf](#)

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5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
<p>FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 4: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 1: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 2: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>

Major Output groups - 2014

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FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG

<Not defined>

Brief summary of your actual 2014 contribution towards the selected MOG:

<Not defined>

Brief 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>

FP1 - MOG # 4: 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 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>

FP1 - MOG # 1: 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 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>

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FP1 - MOG # 2: 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 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>

Major Output groups - 2015

FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

Developed robust gender-responsive framework for targeting and implementing CSAPs within CSVs for increased adoption. Evidence of CSAPs from CSVs are being used by the Govts
Pilots of action research on CSAPs in 3 model CSVs each in Odisha, Karnataka, & Bangladesh were done.

Major climate related stresses across sites identified

Brief 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 and social equity are taken into account as an approach towards scaling CSVs. A peer reviewed paper has been published

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FP1 - MOG # 4: 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:

Case study of CSVs successes and their verification in Haryana. Pilots on CSVs at new locations and increased awareness and enhanced capacity of stakeholders including policy level engagements on climate literacy.

Brief 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 and social equity are taken into account as an approach towards scaling CSVs. Peer reviewed research articles have been published on gender. A framework on mainstreaming gender for scaling CSA.

FP1 - MOG # 1: 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:

Evidence for the productive ,profitable, adapted and scalable CSAPs from the established ~50 CSV sites in Haryana & Bihar are quantified (Peer reviewed publications and report). Protocols and minimum data needs for verification of CSAPs are identified

Brief 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 and social equity are taken into account as an approach towards scaling CSVs

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FP1 - MOG # 2: 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:

Diversity of farming systems at sites described and tools/models for exploratory analysis of CSAPs are defined

Capacity of NARS researchers enhanced through international course on Farming Systems design, targeting typology

Synthesis report on conceptual framework of farming system typology developed

Structural & functional farming systems typologies developed for Haryana, and Bihar

Brief 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 and social equity are taken into account as an approach towards scaling CSVs

Major Output groups - 2016

FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

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

At least 2 peer reviewed high impact publications and policy briefs on CSAPs and case study highlighting upscaling of CSVs is recognized.

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

Gender and social equity are taken into account as an approach towards scaling CSVs

FP1 - MOG # 4: 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

Relevant development champions identified and involved in CSVs. Historical climate analyses & climate change knowledge for target locations made available to researchers, policy makers & farmers for prioritizing CSAPs

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

gender and social inclusion are identified while undertaking deliverables

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FP1 - MOG # 1: 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

Pilots of action research in across sites will generate Database and evidence for the adaptive capacity and environmental footprint of multi-commodity CSAPs within CSV pilots.

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

Enhanced awareness, knowledge and capacity to implement CSAPs at scale

FP1 - MOG # 2: 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

Atleast 2 peer reviewed publications on gender across contrasting typologiesof eastern& north-western IGP

Database and evidences for the adaptive capacity and environmental footprint of multi-commodity CSAPs withinCSV pilots

Socio-economic&genderdisaggregated quantified informationto understand farm-decision making adoption ofCSAPs in diverse farming system typologies in Haryana&Bihar

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

Women are integral part of socio-eceonomic upliftment of society across typologies

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: <Not defined>

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5.2 Deliverables

Deliverable #1

Main Information	
Title: Developed robust gender-responsive framework for targeting and implementing CSAPs within CSVs for increased adoption	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	

Next-user
Governments at different levels, CSOs, women organizations, NGOs,
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Knowledge sharing, stakeholder consultations/workshops, regional and local travelling seminars, Capacity development of

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	4

Deliverable dissemination
Open access restriction: Yes

Submitted on 2016-03-03 at 13:35 UTC

License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Gender Framework.pdf 468-Gender CCAFS PB10.pdf 468-Gender-Mehar, mittal, prasad- CC and gender-JRS feb2016.pdf

Deliverable #2

Main Information	
Title: Pilots of action research on CSAPs in 3 model CSVs each in Odisha, Karnataka, & Bangladesh	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	
Next-user	
CCAFSFP 1.2, 1.3 and 2, Researchers, Farmers organizations, women groups & civil society organizations, Local Govt bodies (ATMA, Co-operative societies), NGOs, service providers & private sector, sub-national Governments	

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Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Database and evidence base will be made available, stakeholder consultations/policy dialogues/workshops, travelling seminar, participatory planning and trials on CSAPs, capacity development of stakeholders

Partners contributing to this deliverable

Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Deliverable Data sharing

[469 Pilots of action research on CSAPs.pdf](#)

Submitted on 2016-03-03 at 13:35 UTC

Deliverable #3

Main Information	
Title: Database and evidences for the adaptive capacity and environmental footprint of multi-commodity CSAPs within CSV pilots	
MOG # 2: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: data and evidences are being collected and synthesized of the same is getting done

Next-user
CCAFSFP1.2,1.3 and2, Researchers,Farmers organizations,women groups and CSO,Local Government bodies (ATMA, Co-operative societies), NGOs, service providers and private sector, sub-national Governments
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Database and evidence base will be made available, stakeholder consultations/policy dialogues/workshops, travelling seminar, participatory planning and trials on CSAPs, capacity development of stakeholders

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #4

Main Information
Title: Historical climate analyses & climate change knowledge for target locations made available to researchers, policy makers & farmers for prioritizing CSAPs
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)
Main Type: Data and information outputs, including datasets, databases and models
Sub Type: Data
Year of expected completion: 2016
Status: On-going
Justification for cancelling the deliverable: data analysis will be done for sharing the results

Next-user
CCAFSFP1.2,1.3 & 2, Researchers, Farmers organizations, women groups & civil society organizations, Local Government bodies (ATMA, Co-operative societies), NGOs, service providers and private sector, sub-national Governments
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale

Submitted on 2016-03-03 at 13:35 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Database and evidence base will be made available, stakeholder consultations/policy dialogues/workshops, travelling seminar, participatory planning and trials on CSAPs, capacity development of stakeholders

Partners contributing to this deliverable

Partner #1 (Responsible): Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Deliverable #5

Submitted on 2016-03-03 at 13:35 UTC

Main Information	
Title: Relevant development champions identified and involved in CSVs	
MOG # 4: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: almost done, just documentation need to be done

Next-user
CCAFSFP1.2,1.3 &2, Researchers, Farmers organizations, women groups and CSO, Local Government bodies (ATMA, Co-operative societies), NGOs, service providers and private sector, sub-national Governments
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Database and evidence base will be made available, stakeholder consultations/policy dialogues/workshops, travelling seminar, participatory planning and trials on CSAPs, capacity development of stakeholders

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Lada, J K <j.k.ladha@irri.org>, IRRI - International Rice Research Institute
Partner #3: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #6

Main Information
Title: Socio-economic&genderdisaggregated quantified informationto understand farm-decision making adoption ofCSAPs in diverse farming system typologies in Haryana&Bihar
MOG # 2: 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)
Main Type: Data and information outputs, including datasets, databases and models
Sub Type: Data
Year of expected completion: 2016
Status: On-going
Justification for cancelling the deliverable: work in progress

Next-user
CCAFSFP1.2,1.3& 2,Researchers,Farmers organizations,women groups&civil society organizations, Local Government bodies (ATMA, Co-operative societies), NGOs, service providers and private sector, sub-national Governments
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale

Submitted on 2016-03-03 at 13:35 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Database and evidence base will be made available, stakeholder consultations/policy dialogues/workshops, travelling seminar, participatory planning and trials on CSAPs, capacity development of stakeholders

Partners contributing to this deliverable

Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Deliverable #7

Submitted on 2016-03-03 at 13:35 UTC

Main Information	
Title: Database&evidences for adaptive capacity&environmental footprint of multi-commodity CSAPs in crop-livestock mixed FS within CSV pilots	
MOG # 2: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Databases
Year of expected completion: 2017	
Status: On-going	Justification for cancelling the deliverable: will start in next few months

Next-user
CCAFSFP1.2,1.3,FP4.1 Extension&development organizations,Farmers organizations&CSO, cal Government bodies (ATMA, Co-operative societies), NGOs, service providers and private sector, State and national Governments
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Case studies of CSAPs and CSVs, Policy dialogues/workshops, Capacity development

Partners contributing to this deliverable
Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #8

Main Information
Title: Participatory ex-ante scenario assessment to understand possible trajectories towards incorporation of CSAP portfolios within livelihoods
MOG # 1: 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)
Main Type: Data and information outputs, including datasets, databases and models
Sub Type: Data
Year of expected completion: 2017
Status: On-going
Justification for cancelling the deliverable: will initiate work in next month

Next-user
CCAFSFP1.2,1.3,FP4.1,Extension&development organizations, Farmers organizations&CSO, cal Government bodies (ATMA, Co-operative societies), NGOs, service providers and private sector, State and national Governments
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Case studies of CSAPs and CSVs, Policy dialogues/workshops, Capacity development

Submitted on 2016-03-03 at 13:35 UTC

Partners contributing to this deliverable

Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files <Not defined>

Deliverable #9

Main Information

Title: Case studies of single versus multi-commodity CSAPs for adaptive capacity, resilience, productivity enhancement

Submitted on 2016-03-03 at 13:35 UTC

MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Case Study
Year of expected completion: 2017	
Status: On-going	Justification for cancelling the deliverable: this is due in 2017 so will start work accordingly

Next-user
CCAFS FP1.2,1.3,FP4.1,Extension&development organizations,Farmers organizations&cCSO, cal Government bodies (ATMA, Co-operative societies), NGOs, service providers and private sector, State and national Governments
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Case studies of CSAPs and CSVs, Policy dialogues/workshops, Capacity development

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #10

Main Information	
Title: At least two policy briefs on CSAPs portfolios and CSVs for diverse production ecologies	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Policy briefs - Briefing paper
Year of expected completion: 2018	
Status: On-going	Justification for cancelling the deliverable: these will be done in due time

Next-user
CCAFS FP 1.2, 1.3, 2, 4.1, Civil society organizations, Advanced research institutions, Policy planners in governments at different levels
Knowledge, attitude, skills and practice changes expected in next-user: Integrating the deliverables into climate and agricultural policies
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Research dissemination regional and national workshops, Publications/ Blogs/Summary papers

Partners contributing to this deliverable
Partner #1 (Responsible): Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Submitted on 2016-03-03 at 13:35 UTC

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #11

Main Information	
Title: Local Govts included CSVs in their investment plans&implemented by 5 sub-national Governments across 3 countries	
MOG # 4: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data

Submitted on 2016-03-03 at 13:35 UTC

Year of expected completion: 2018	Justification for cancelling the deliverable:
Status: On-going	Govt. of Haryana have already included 500 villages in thier planning and we are in progress to get in more

Next-user
CCAFS FP 1.2, 1.3, 2, 4.1, Civil society organizations, Advanced research institutions, Policy planners in governments at different levels
Knowledge, attitude, skills and practice changes expected in next-user: Integrating the deliverables into climate and agricultural policies
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Research dissemination regional and national workshops, Publications/ Blogs/Summary papers

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Language: <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing****Deliverable files**

<Not defined>

Deliverable #12**Main Information****Title:** At least 2 peer reviewed high impact publications/policy briefs on CSAPs for diverse production ecologies**MOG # 1:** 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)**Main Type:** Data and information outputs, including datasets, databases and models**Sub Type:** Data**Year of expected completion:** 2018**Status:** On-going**Justification for cancelling the deliverable:** publications will be released in 2018**Next-user**

CCAFS FP 1.2, 1.3, 2, 4.1, Civil society organizations, Advanced research institutions, Policy planners in governments at different levels

Knowledge, attitude, skills and practice changes expected in next-user: Integrating the deliverables into climate and agricultural policies**Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:** Research dissemination regional and national workshops, Publications/ Blogs/Summary papers**Partners contributing to this deliverable****Partner #1 (Responsible):** Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center**Deliverable Ranking****Address gender and social inclusion aspect**

<Not defined>

Potential for/ actual contribution to outcomes

<Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #13

Main Information	
Title: Identification of major climate related stresses across sites	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	

Submitted on 2016-03-03 at 13:35 UTC

Next-user
Research and development actors, Governments at different levels, CCAFS team and project partners, CCAFS FP 1.2, 1.3, 4.1
<p>Knowledge, attitude, skills and practice changes expected in next-user: Understanding and capturing diversity of farm households&farming systems is essential for targeting interventions.Descriptive information of key farm household characteristics&farming systems across& within locations will increase understanding of farming systems by partners&shape further activities of the project.</p> <p>Strengthening capacity of stakeholders to understand the challenges,opportunities&approaches to climate change adaptation and mitigation</p>
<p>Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: •Participation of all major stakeholders' right from the planning stage of the project interventions, workshops, briefs, reports.</p> <p>•An open source data set with most important characteristic of farming systems in the study sites is available to partners and major stakeholders</p>

Partners contributing to this deliverable
<p>Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center</p>

Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	3
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Coverage: <Not defined>

Deliverable Data sharing

[482-AGEE-S-16-00267.pdf](#)[Climate stresses_CSOptions.pdf](#)

Deliverable #14

Main Information

Title: Synthesis report on conceptual framework of farm household/farming system typology, components/methodology harmonized across sites

MOG # 1: 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)

Main Type: Data and information outputs, including datasets, databases and models

Sub Type: Data

Year of expected completion: 2015

Status: Complete

Next-user

Research and development actors, Governments at different levels, CCAFS team and project partners, CCAFS FP 1.2, 1.3, 4.1

Knowledge, attitude, skills and practice changes expected in next-user: •Understanding diversity of farm households/farming systems is essential for targeting interventions. Descriptive information of key farm household characteristics/farming systems will increase understanding of farming systems by partners, shape further activities of the project.
•Strengthening capacity of stakeholders to understand the challenges, opportunities and approaches to climate change adaptation and mitigation

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: •Participation of all major stakeholders' right from the planning stage of the project interventions, workshops, briefs, reports.
•An open source data set with most important characteristic of farming systems in the study sites is available to partners and major stakeholders

Partners contributing to this deliverable

Partner #1 (Responsible): Whitbread, Anthony <a.whitbread@cgiar.org>, ICRISAT - International Crops Research Institute for the Semi-Arid Tropics

Partner #2: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Submitted on 2016-03-03 at 13:35 UTC

Partner #3: Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Partner #4: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	3
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
483- Conceptual framework.pdf
483-Conceptual framework.pdf

Deliverable #15

Main Information
Title: Diversity of farming systems at sites described and tools/models for exploratory analysis of CSAPs defined

Submitted on 2016-03-03 at 13:35 UTC

MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	

Next-user
Research and development actors, Governments at different levels, CCAFS team and project partners, CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> •Understanding diversity of farm households and farming systems is essential for targeting interventions. Descriptive information of key farm household characteristics and farming systems for sites will increase understanding of farming systems by partners. •Strengthening capacity of stakeholders to understand the challenges, opportunities and approaches to climate change adaptation and mitigation
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> •Participation of all major stakeholders' right from the planning stage of the project interventions, workshops, briefs, reports. •An open source data set with most important characteristic of farming systems in the study sites is available to partners and major stakeholders

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #3: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	4

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
First International Training Workshop on Farming Systems Analysis in India.pdf
484-CCAFS Foresight and targeting climate smart agricultural practices in Bihar.pdf

Deliverable #16

Main Information
Title: Structural and functional farm household/farming systems typologies developed for targeting CSAPs in Haryana, and Bihar
MOG # 1: 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)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Research report
Year of expected completion: 2015
Status: Complete

Next-user
Research and development actors, Governments at different levels, CCAFS team and project partners, CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> •Understanding and capturing diversity of farm households and farming systems is essential for targeting interventions. Descriptive information of key farm household characteristics and farming systems will increase understanding of farming systems by partners. •Strengthening capacity of stakeholders to understand the challenges, opportunities and approaches to climate change adaptation and mitigation

Submitted on 2016-03-03 at 13:35 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:

- Participation of all major stakeholders' right from the planning stage of the project interventions, workshops, briefs, reports.
- An open source data set with most important characteristic of farming systems in the study sites is available to partners and major stakeholders

Partners contributing to this deliverable

Partner #1 (Responsible): Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Partner #2: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Partner #3: Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Deliverable Data sharing

Submitted on 2016-03-03 at 13:35 UTC

[485-Targeting CSAPs.pdf](#)
[Farming System Report.pdf](#)

Deliverable #17

Main Information	
Title: Structural&functional farm household and farming systems typologies developed across/within sites for targeting CSAPsin Karnataka & Punjab	
MOG # 2: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: groundwork is undertaken in establishing typologies

Next-user
Farmers, development actors, researchers and policy makers as well as CCAFS FP 1.2, 1.3, 4.1
<p>Knowledge, attitude, skills and practice changes expected in next-user: •A database, coherent farm household groups&methodological insights for capturing the diversity of FH and FS. Detailed characteristics of farm household typologies help scaling up and out CSAP's.</p> <p>•Farmers and other stakeholders participate evaluating CSAPs portfolios, downscaled SFC help better adaptation, NARS collaborates and replicates identified portfolios.</p>
<p>Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: •An open source data set available to partners& major stakeholders with important characteristic of FS&FH</p> <p>•Field level validation of CSAPs, PR4D models enable convergence and collective action, community nurseries, farm machinery custom-hiring centres and group marketing,</p> <p>•ICT mediated climate early warning systems, historical climate analyses and weekly agro-met advisories</p>

Partners contributing to this deliverable
Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>

Submitted on 2016-03-03 at 13:35 UTC

What is your personal perspective of the importance of this product	<Not defined>
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Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #18

Main Information	
Title: Participatory validation of FS typologies with CSVs&potential effects of CSA interventions of diverse typologies assessed&documented	
MOG # 2: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: study will be undertaken

Submitted on 2016-03-03 at 13:35 UTC

Next-user
Farmers, development actors, researchers and policy makers as well as CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: •A database, coherent farm household groups and methodological insights for capturing the diversity of farm households and farming systems will allow next user to engage in systems perspective for targeting interventions. •Farmers&stakeholders participate in evaluating CSAPs portfolios, downscaled SFC help in better adaptation, NARS collaborates and replicates identified portfolios.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: •An open source data set with important characteristic of farming systems and farm household types available to partners&stakeholders •Field level validation of CSAPs, PR4D models enable convergence&collective action among various stakeholders in climate contingency plan implementation •ICT mediated climate early warning systems, historical climate analyses&weekly agro-met advisories would empower farmers

Partners contributing to this deliverable
Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Coverage: <Not defined>

Deliverable Data sharing**Deliverable files**

<Not defined>

Deliverable #19**Main Information**

Title: A methodological brief on statistical and empirical methodologies (their role, strengths and limitations, relevance and implications) for capturing the diversity of farming systems and vulnerability to climate risk

MOG # 1: 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)

Main Type: Data and information outputs, including datasets, databases and models

Sub Type: Data

Year of expected completion: 2016

Status: On-going

Justification for cancelling the deliverable: documentary evidence will be made available

Next-user

Farmers, development actors, researchers and policy makers as well as CCAFS FP 1.2, 1.3, 4.1

Knowledge, attitude, skills and practice changes expected in next-user: •A database for capturing diversity of farm households and farming systems will allow next user to engage in systems perspective for targeting interventions. for scaling up and out CSAP's.

•Farmers and other stakeholders participate in evaluating CSAPs portfolios, downscaled SFC help in better adaptation, NARS collaborates and replicates identified portfolios.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: •An open source data set is available

•Field level validation of CSAPs, PR4D models enable convergence and collective action among various stakeholders in climate contingency plan implementation

• ICT mediated climate early warning systems, historical climate analyses and weekly agro-met advisories would empower farmers to take smart and swift decisions

Partners contributing to this deliverable

Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Submitted on 2016-03-03 at 13:35 UTC

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #20

Main Information	
Title: Participatory validation of farming system typologies within CSVs, and potential effects of CSAPs in diverse typologies	
MOG # 1: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data

Submitted on 2016-03-03 at 13:35 UTC

Year of expected completion: 2017	
Status: On-going	Justification for cancelling the deliverable: will be undertaken by end of 2016

Next-user
Farmers, development actors, government at different levels, researchers and policy makers as well as CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: Farmers and other stakeholders learned the tools and methods to adopt CSAPs portfolios, downscaled SFC help in better adaptation, NARS collaborates and replicates identified portfolios, policy makers are sensitized to mainstream CSAPs.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: •Sharing of success stories on CSAPs, workshops, briefs, ex-ante analysis of viability of investment on CSAPs in different agro-ecoregions •Farmers benefit directly and other stakeholders are sensitized on the need and methods to mainstream

Partners contributing to this deliverable
Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Lada, J K <j.k.ladha@irri.org>, IRRI - International Rice Research Institute
Partner #3: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>

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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #21

Main Information	
Title: Peer review publications on structural&functional typologies of farm households& farming systems for climate change adaptation.	
MOG # 1: 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)	
Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2017	
Status: On-going	Justification for cancelling the deliverable: publications will be made

Next-user
Farmers, development actors, government at different levels, researchers and policy makers as well as CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: Farmers and other stakeholders learned the tools and methods to adopt CSAPs portfolios, downscaled SFC help in better adaptation, NARS collaborates and replicates identified portfolios, policy makers are sensitized to mainstream CSAPs.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> •Sharing of success stories on CSAPs, workshops, briefs, ex-ante analysis of viability of investment on CSAPs in different agro-ecoregions •Farmers benefit directly and other stakeholders are sensitized on the need and methods to mainstream

Partners contributing to this deliverable

Submitted on 2016-03-03 at 13:35 UTC

Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #22

Main Information
Title: Impact narratives, policy briefs&enhanced capacity of stakeholders on integrated approaches& tools for adoption of CSAPs

Submitted on 2016-03-03 at 13:35 UTC

MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Policy briefs - Briefing paper
Year of expected completion: 2018	
Status: On-going	Justification for cancelling the deliverable: reports on the same will be made by 2018

Next-user
Development actors, government at different levels, researchers and policy makers as well as CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: •Farmers and other stakeholders learned the tools and methods to adopt and adapt CSAPs portfolios, downscaled SFC help in better adaptation, NARS collaborates and replicates identified portfolios, policy makers take decisions to mainstream CSAPs in the regular development process.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: •Workshops, briefs, sharing of success stories on CSAPs and ex-ante analysis of viability of investment on CSAPs in different agro-ecoregions and tradeoffs. •Farmers benefit directly and relevant stakeholders pilot ICT mediated climate early warning systems, historical climate analyses and weekly agro-met advisories in CSVs and other locations.

Partners contributing to this deliverable
Partner #1 (Responsible): Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #23

Main Information	
Title: Policy brief based on scientific publication on the typologies across and within sites published	
MOG # 2: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Policy briefs - Briefing paper
Year of expected completion: 2018	
Status: On-going	Justification for cancelling the deliverable: published document on policy briefs will be made available

Next-user
Development actors, government at different levels, researchers and policy makers as well as CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: •Farmers and other stakeholders learned the tools and methods to adopt and adapt CSAPs portfolios, downscaled SFC help in better adaptation, NARS collaborates and replicates identified portfolios, policy makers take decisions to mainstream CSAPs in the regular development process.

Submitted on 2016-03-03 at 13:35 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:

- Workshops, briefs, sharing of success stories on CSAPs and ex-ante analysis of viability of investment on CSAPs in different agro-ecoregions and tradeoffs.
- Farmers benefit directly and relevant stakeholders pilot ICT mediated climate early warning systems, historical climate analyses and weekly agro-met advisories in CSVs and other locations.

Partners contributing to this deliverable

Partner #1 (Responsible): Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

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Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Deliverable #24

Main Information	
Title: Protocols and minimum data needs for verification of CSAPs	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	

Next-user
Farmers organizations, community based organizations, local government bodies, development actors, service/business providers, researchers and policy makers, CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge of the farmers, local community and local Govt
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Sharing knowledge through case study briefs, workshops/community consultations at local and sub-national level, capacity development

Partners contributing to this deliverable
Partner #1 (Responsible): Lada, J K <j.k.ladha@irri.org>, IRRI - International Rice Research Institute

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	4

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Indicators for verification of CSV.pdf

Deliverable #25

Main Information
Title: Case studies of CSVs successes and their verification in Haryana
MOG # 1: 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)
Main Type: Reports, Reference Materials and Other Papers Sub Type: Case Study
Year of expected completion: 2015
Status: Complete

Next-user
Farmers organizations, community organizations, local government bodies, development actors, service/business providers, researchers and policy makers, CCAFS FP 1.2, 1.3, 4.1
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced knowledge of the farmers, local community and local Govt
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Sharing knowledge through case study briefs, workshops/community consultations at local and sub-national level, capacity development

Partners contributing to this deliverable
Partner #1 (Responsible): Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Submitted on 2016-03-03 at 13:35 UTC

Deliverable Ranking	
Address gender and social inclusion aspect	4
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	4

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
case study_Haryana.pdf
Climate Smart Villages in Haryana_LR_08-06-2015.pdf

Deliverable #26

Main Information	
Title: Evidence for the productive,profitable,adapted and scalable CSAPs from the established ~40 CSVsites in Haryana&Bihar quantified	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Reference material

Submitted on 2016-03-03 at 13:35 UTC

Year of expected completion: 2015**Status:** Complete**Next-user**

CCAFSFP 1.2,2,4.1 Researchers, Farmers organizations and civil society organizations, Local Government bodies, (ATMA,Co-operative societies),NGOs,service providers and private sector, State Governments

Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness and capacity to implement CSAPs at scale

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database and evidence base will be made available, Stakeholder consultations/workshops, regional and local travelling seminars, Capacity development of stakeholders

Partners contributing to this deliverable

Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	4
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	4

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: cgspace

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: This report by CCAFS and CIMMYT highlights some early evidence from Climate-Smart Villages in Haryana. It gives an overview of the adoption of climate smart agriculture in Karnal district of Haryana. Climate Smart Villages are sites where farmers, researchers, and local government partners and the private sector come together to understand which climate smart agriculture practices are best suited for a particular location. A portfolio of interventions are chosen that will increase farmers' incomes through higher productivity, while building their resilience to extreme and variable climatic events. The interventions aim to reduce greenhouse gas emissions and thus ensure that resources are used sustainably.

Submitted on 2016-03-03 at 13:35 UTC

Creator / Authors: CGIAR Research Program on Climate Change, Agriculture and Food Security, International Maize and Wheat Improvement Center
Author Identifier: <Not defined>
Publication / Creation date: 2014-09-12T08:37:54Z,2014-09-12T08:37:54Z,2014-08
Language: en
Coverage: <Not defined>

Deliverable Data sharing
1397-NonCO2GHG_JIES.PDF 1397-Better Crops 2015-3 p18.pdf 1397-CROP DIVERSIFICATION.pdf 1397-SSAJ_finalPdf_revised.pdf 1397-Journal of Integrative Agriculture- CLimate Chage (2015).PDF 1397-Impact of Laser Leveling_Food Security 2015.pdf 1397-LUP_2016_126_Original_V0 (2).pdf Climate Smart Villages in Haryana_LR_08-06-2015.pdf CSVs in Bihar.pdf

Deliverable #27

Main Information	
Title: Atleast one case study highlighting upscaling of CSVs in Haryana	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Case Study
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: Activity will be started in 2016

Submitted on 2016-03-03 at 13:35 UTC

Next-user
CCAFSFP 1.2,1.3, FP 4.1,Extension&dev. organizations,Farmers organizations andCSO, local Govt bodies(ATMA,Co-operative societies), NGOs, service providers and private sector, State &national Govt
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Case studies of CSAPs and CSVs, Policy dialogues/workshops, Capacity development

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #28

Main Information	
Title: At least 2 peer reviewed high impact publications and policy briefs on CSAPs	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: work in progress

Next-user
Extension&dev. organizations,Farmers organizations andCSO, local Govt bodies(ATMA,Co-operative societies), NGOs, service providers and private sector, State &national Govt
Knowledge, attitude, skills and practice changes expected in next-user: Integrating the deliverables into climate and agricultural policies
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Research dissemination regional and national workshops, Publications/ Blogs/Summary papers

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Submitted on 2016-03-03 at 13:35 UTC

Deliverable dissemination
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License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

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Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #29

Main Information
Title: Atleast 2 peer reviewed publications on gender across contrasting typologies of eastern & north-western IGP
MOG # 2: 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)
Main Type: Peer reviewed Publications
Sub Type: Peer-reviewed journal articles
Year of expected completion: 2016
Status: On-going
Justification for cancelling the deliverable: publications in progress

Next-user
Governments at different levels, CSOs, women organizations, NGOs
Knowledge, attitude, skills and practice changes expected in next-user: Enhanced awareness, knowledge and capacity to implement CSAPs at scale

Submitted on 2016-03-03 at 13:35 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Knowledge sharing, stakeholder consultations/workshops, regional and local travelling seminars, Capacity development of stakeholders

Partner #1 (Responsible): Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable files
<Not defined>

5.3 Summary on next-users

Next user #1
<p>Key next user for the current reporting period. Key game changers. Observed Knowledge, Attitude, Skills and practice changes: CCAFSFP 1.2,2,4.1 Researchers, Farmers organizations and civil society organizations, Local Government bodies, (ATMA,Co-operative societies),NGOs,service providers and private sector, State Governments.</p> <p>Descriptive information of key farm household characteristics and farming systems for sites will increase understanding of farming systems by partners for targeting interventions.</p> <p>Enhanced capacity of stakeholders to understand the challenges, opportunities and approaches to climate change adaptation and mitigation.</p>
<p>Strategies (facilitation, engagement, knowledge sharing etc.) you used to encourage and enable this next user to utilize deliverables and adopt changes: Knowledge sharing, stakeholder consultations/workshops, regional and local travelling seminars</p> <p>Database and evidence base made available, stakeholder consultations/policy dialogues/workshops, travelling seminar, participatory planning and trials on CSAPs, capacity development of stakeholders</p> <p>Participation of all major stakeholders' right from the planning stage of the project interventions, workshops, briefs, reports.</p> <p>An open source data set with most important characteristic of farming systems in the study sites made available to partners and major stakeholders</p>
<p>Reported deliverables serve as evidence towards this achieved change: The evidence from CSVs, peer reviewed publications, policy level dialogues and enhanced capacity and awareness of stakeholders</p>
<p>Lessons and implications for the next planning cycle: Engaging next users in the process of CSV pilots and real time sharing of evidence as how CSAPs are helping in addressing climate risks for example we shared the role of CSAPs in reducing risks of excess rains on wheat yield compared to business as usual in North-West India during 2015.</p>

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5.4 Project highlights

Project highlight Information #1	
Title: piloting of 500 climate smart villages in haryana	
Author: ML Jat	Subject: <Not defined>
Publisher: <Not defined>	Year: 2015
Project highlights types Participatory action research Innovative non-research partnerships Capacity enhancement Food security	Start date: 2016-02-22
End date: 2016-02-22	Is global: No
Country: India	Keywords: 500 Climate smart Villages
Highlight description: Department of agriculture in close association with CIMMYT-CCAFS piloted concept of Climate smart villages in 27 villages in Karnal district	
Introduction / Objectives: <Not defined>	
Results: for further scaling CSA, DoA has decided to adopt 5000 CSVs in paddy-wheat rotation cropping system in state	
Partners: Department of agriculture, Haryana, India	
Links / Sources for further information: https://activities.ccafs.cgiar.org/data/projects/25/project_outcome/DoA,%20Haryana%20letter.pdf http://inside.cimmyt.org/Informa%20Repository/Informa%2006-10%20July%202015.pdf	

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Project highlight Information #1	
Title: Climate Change and Agriculture: Adaptation Strategies and Mitigation Opportunities for Food Security in South Asia and Latin America	
Author: Mangi L. Jat**1 Jagdish C. Dagar**, Tek B. Sapkota*, Yadvinder Singh*, QI Bram Govaerts', Santiago L. Ridaura', Yashpal S. Saharawat", Ramesh K. Sharma, Jagdish P. Tatarwal, Huntington Hobbs, Clare Stirling	Subject: <Not defined>
Publisher: Elsevier Inc	Year: 2015
Project highlights types Gender and social inclusion Capacity enhancement Food security	Start date: 2016-02-22
End date: 2016-02-22	Is global: No
Country:	Keywords: Climate Change, Food security, Emission, Adaptation
Highlight description: <ul style="list-style-type: none"> Developing countries in SA and LA are more vulnerable to the effect of climate change yet have limited coping mechanisms Various climate smart practices such as development of multiple-stress tolerant crop cultivars, practices to increase input-use efficiencies, restoration of degraded lands and conservation of biodiversity must of promoted at regional and country level to ensure durable food and nutritional security in these countries These countries should formulate both short-term and long-term policies for improvement, promotion of such climate smart practices 	
Introduction / Objectives: The world has witnessed a remarkable increase in atmospheric concentration of greenhouse gases during the past two centuries. Increase concentration of GHG increases atmospheric temperature which results into reduced crop duration, increase crop respiration rates, hastens soil mineralization rates, decrease fertilizer-use-efficiency and increase evapotranspiration all leading to reduced crop yield. These effects of climate change will be even larger in developing countries in South Asia and Latina America. This is because majority of population in these countries depend on agriculture for their livelihood and agriculture suffers most from the effect of climate change.	
Results: Consistent warming trends and more frequent and intense extreme weather events have been observed across the countries in South Asia and Latin America in recent decades. Climatic events like cold wave, heat wave, drought, and floods have significantly influenced the production of food crops. Given the situations, climate change adaptation and mitigation in agriculture has been the subject of intensive scientific investigation recently. Development of multiple stress-tolerant varieties, efficient cropping systems, water harvesting and supplemental irrigation for drought proofing in rainfed areas can help in building resilience against the adverse climatic variability. Alternate land-use systems like agroforestry and other biological carbon capture systems can help both in adaptation and climate change mitigation. Accurate and reliable forecasting of environmental changes will be of immense importance, and policies to support the dissemination of these information are required to help the farmers. Researchers, planners, and policy makers must develop comprehensive adaptation and mitigation strategies to cope with the adverse impact of climate change. Enabling policies for the promotion of climate-smart agriculture along with required input and market are necessary to meet the food security demand in the face of climate change.	

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Partners: 1. Central Soil Salinity Research Institute (CSSRI), Karnal, Haryana
2. International Centre for Research in Dry Areas (ICARDA), Kabul, Afghanistan
3. Indian Institute of Wheat and Barely Research, Karnal, Haryana, India
4. Agriculture Research Station, Kota Agriculture University, Kota, Rajasthan, India

Links / Sources for further information: <http://dx.doi.org/10.1016/bs.agron.2015.12.005>

6. Activities

Activity #1	
Title: Science-based, scalable evidences for climate smart agricultural practices (CSAPs) identified&implemented through Climate Smart Villages (CSVs)	
Description: Database and evidences of SAPs developed, refined and tested for different commodities and agro-ecological zones in CCAFS and related projects will be used for developing comprehensive CSAPs portfolios. Innovative approaches will be used to integrate the knowledge and information to harness the benefits at a larger scale specifically for smallholder farming communities. This includes systems analysis (combining seasonal climate forecasts, historical weather analysis, crop/soil modelling and participatory approaches) to identify, potentially adoptable CSA practices, strategies that are differentiated by agro-ecosystem and farm typology and that are gender responsive. The CSAP portfolios will be evaluated within climate smart villages for multi-commodity systems that contribute to food security, social equity, adaptive capacity and mitigation. The study will built on the existing CSVs in Haryana, Bihar and Punjab (India) and new CSVs will be piloted as learning sites for evidence base in the new geographies (Karnataka, Odisha, Andhra Pradesh in India; and Bangladesh).	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	Justification: Progress towards developing comprehensive CSAPs portfolios has been done. Database and evidences for the productive ,profitable, adapted and scalable CSAPs from the established ~50 CSV sites was collected. Robust gender-responsive framework for targeting and implementing CSAPs within CSVs for increased adoption has been developed Pilots of action research on CSAPs in 3 model CSVs will contribute to food security, social equity, adaptive capacity and mitigation.

Activity #2	
Title: Framework for targeting adoption of CSAP portfolios by a diverse farm household types within CSVs	
Description: Effective targeting of CSAPs requires understanding of diversity of farm households and farming systems, their main components, characteristics, interrelationships and flows. Farm household typologies provide systemic understanding of diversity among and similarity within, coherent groups of farm households and their corresponding farming systems with different structural and functional characteristics. Typologies for different project sites will identify groups of farm households based on farm structural features (agro-ecologies, farm/household size, gender, livelihood, commercial activities and socio-economic indicators) as well as on functional characteristics related to crop-livestock management systems, performances, and resulting productivity. In addition, perceived and actual vulnerability to climate risk and available adaptation strategies based on CSAPs will be integrated in typology to identify groups of farm households that CSAP's should be targeting. The farm household typologies will be validated within CSVs in coherence with A251. The validation results will be used for developing analogues of the CSAPs vis-à-vis farm typologies.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018

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Leader: Lopez Ridaura, Santiago <s.l.ridaura@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	Justification: Diversity of farming systems at sites described and tools/models for exploratory analysis of CSAPs defined Synthesis report on conceptual framework of farm household/farming system typology, components/methodology harmonized across sites. It helped in understanding Structural and functional farm household/farming systems typologies for targeting CSAPs in Haryana, and Bihar. Major climate related stresses across sites were identified to target CSAP's on diversity of farm households. An international training workshop on Farming systems analysis: design, typologies and targeting in collaboration with Wageningen University and CIMMYT projects like CSISA, ACIAR-SRFSI was organized for the young NARS scientists from India, Nepal and Bangladesh

Activity #3

Title: Verification of CSV's as indicators of improved income food security livelihoods over non-CSV's across agroecosystems	
Description: Single commodity focus and technology-centric approach are no longer able to address the challenges of natural resource degradation and food security. The databases of holistic system approach with CSAP portfolios validated within CSVs for diverse agro-ecologies and region will be used to quantify and demonstrate how integrated climate smart agriculture practices portfolios implemented using community based approach of CSVs lead to food security, better incomes, adaptive capacity and mitigation co-benefits compared to commodity focused practices in non-CSVs. Involving local community and local development agencies, protocols will be developed and database will be collected from randomly selected CSVs and non-CSVs in different ecologies. The synthesized document of CSVs across different agro-ecologies will be shared with local, sub-national and national Govts to increase investments on CSVs for future food security.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2015
Leader: Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: Complete	

Lessons regarding your project activities and possible implications for the coming planning cycle: The activity A253 has been withdrawn during 2016 due to large budget cuts. but the data generated as per the minimum data protocols developed during 2015, will be used for an analysis on verification. Uncertainty of funds for the activities which are implemented at field in CSVs affects the continuity of the work and hence quality of outputs.

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7. Leverages

Leverage #1	
Title: ICAR-National Innovation on Climate Resilient Agriculture (NICRA)-a large project that contributes to CCAFS. A lot of leveraged funds from ICAR, Govt of India is available.	
Partner name: ICAR - Indian Council of Agricultural Research - India	
Year: 2015	
Flagship: FP1: Climate-smart practices	Budget: US \$300,000.00

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Title: Recommendation domains, incentives and institutions for equitable local adaptation planning at sub-national level and scaling-up CSAPs in wheat & maize systems

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

Project is working on

Flaship(s)	Region(s)
FP1: Climate-smart practices	RP SAs: South Asia

Bilateral project(s) contributing to this project
233 - ACIAR-SRFSI (Sustainable and resilient farming systems intensification for eastern Gangetic plains)-CIMMYT
234 - Cereal Systems Initiative for South Asia (CSISA)-CIMMYT

Summary

To respond the food security challenges, the climate smart agricultural (CSA) interventions & policy instruments that provide resilience to climatic variability, sustainably enhance yield/farm profits need to be targeted/mainstreamed into local development plans. CSAPs at plot-scale revealed significant benefits for food security and adaptive capacity and which have been very encouraging at farmer and policy level. However, large-scale adoption of CSAPs needs mainstreaming strategy for local level targeting and implementing CSAPs. Project will focus on developing local adaptation planning and business cases for scaling CSAPs. The project will also aim at an iterative process to scan, define and address opportunities and barriers for developing, piloting and scaling business cases for CSAPs. Innovation platforms' will be established around CSAPs to validate climate smart business cases. Robust science-based evidences on CSAPs and enhanced capacity will feed into sub-national policy that influences the trajectories of farmer households towards better adaptation to climate change.

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2. Partners

Partner #1

Institution: IFPRI - International Food Policy Research Institute

Contacts

Type	Contact	Responsibilities and contributions
Partner	Joshi, PK <p.joshi@cgiar.org>	Contribute to development; facilitate validation and scaling-up of incentive based policy instruments that influence the trajectories of farmer's households towards better adaptation to climate change. Contribute to cross cutting activities on database management, gender, monitoring and evaluations, capacity development related to policies and institutional arrangements. Activity 2014-260 *Leader*.

Partner #2 (Leader)

Institution: CIMMYT - International Maize and Wheat Improvement Center

Contacts

Type	Contact	Responsibilities and contributions
Project Leader	Jat, ML <m.jat@cgiar.org>	Activity 2014-258 *Partner*. Contributing to the development and validation of CSA business models in Punjab, Haryana, Bihar & and contribute to the other locations. Organize and engage women groups/cooperatives for development and validation of CSAP business models.
Partner	Mittal, Surabhi <s.mittal@cgiar.org>	Activity 2014-260 *Partner*. Contribute to development; facilitate validation and scaling-up of incentive based policy instruments that influence the trajectories of farmer's households towards better adaptation to climate change. Contribute to cross cutting activities on database management, gender, monitoring and evaluations, capacity development related to policies and institutional arrangements.
Partner	Aryal, Jeetendra <j.aryal@cgiar.org>	Activity 2014-257 *Leader*.

Partner #3

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

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Contacts

Type	Contact	Responsibilities and contributions
Partner	Whitbread, Anthony <a.whitbread@cgiar.org>	Activity 2014-257 *Partner*. Activity 2014-258 *Partner*. Contributing to the development and validation of LAPA, CSA business models and modelling CSAPs related to rainfed systems across the sites. Major responsibility to implementing the project activities in within CSVs in Karnataka, Andhra Pradesh and contribute to the other locations. Contribute to cross cutting activities on database management, gender, monitoring and evaluations, capacity development.

Partner #4**Institution:** ICAR - Indian Council of Agricultural Research**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - India

Contacts

Type	Contact	Responsibilities and contributions
Partner	Sikka, A.K <aksikka@icar.org.in>	Activity 2014-257 *Partner*. Activity 2014-258 *Partner*. Activity 2014-260 *Partner*. Contribute to the validation and scaling-up of LAPA guidelines and leveraging resources through linking related projects for scaling out climate smart agriculture in India. Contribute to validation of CSAP business models in India. Contribute to the development of incentive based policy instruments for CSAPs portfolios for diverse ecologies and within CSV sites (CCAFS and NICRA) across India. Facilitate stakeholder consultation and partnerships with NARES (ICAR Institutes, State Agriculture Universities, State Department of Agriculture) and leveraging resources through linking related projects for scaling out climate smart agriculture.

Partner #5**Institution:** NARC - Nepal Agricultural Research Council**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - India

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Contacts

Type	Contact	Responsibilities and contributions
Partner	Bahadur , Dil <gurung_dilbahadur@yahoo.com>	<p>Activity 2014-257 *Partner*. Activity 2014-258 *Partner*. Activity 2014-260 *Partner*.</p> <p>Contribute to the development of incentive based policy instruments for CSAPs portfolios for diverse ecologies and within CSV sites in Nepal. Facilitate stakeholder consultation and partnerships with NARES NARC, Department of Agriculture etc) and leveraging resources through linking related projects for scaling out climate smart agriculture in Nepal.</p> <p>The activities in Nepal could not be initiated due to Budget cuts and hence in consultation with CCAFS South Asia Regional Program, the research portfolio was prioritized to get maximum return from the available resources</p>

Partner #6**Institution:** BARC - Bangladesh Agricultural Research Council**CCAFS Partner(s) allocating budget:** <Not defined>**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Director, Executive <director-aic@barc.gov.bd>	<p>Activity 2014-257 *Partner*. Activity 2014-258 *Partner*. Activity 2014-260 *Partner*.</p> <p>Contribute to the validation and scaling-up of LAPA guidelines and leveraging resources through linking related projects for scaling out climate smart agriculture in Bangladesh.</p> <p>Contribute to validation of CSAP business models in Bangladesh.</p> <p>Contribute to the development of incentive based policy instruments for CSAPs portfolios for diverse ecologies and within CSV sites in Bangladesh. Facilitate stakeholder consultation and partnerships with BARC, BARI, BRRI, Department of Agriculture etc) and leveraging resources through linking related projects for scaling out climate smart agriculture in Bangladesh.</p>

Partner #7**Institution:** IWMI - International Water Management Institute

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Contacts

Type	Contact	Responsibilities and contributions
Partner	Aggarwal, Pramod <P.K.Aggarwal@cgiar.org>	<p>Activity 2014-258 *Partner*. For sensitization and orientation of stakeholders about local level mainstreaming of CSAPs and CSVs, CIMMYT together with other partners and CCAFS-South Asia program will jointly organize stakeholder consultations, guidelines and training material related to LAPA and CS business models.</p> <p>As the South Asia Regional Program was hosted by IWMI and hence the activities mentioned to IWMI but its basically CCAFS-South Asia.</p>

Partner #8**Institution:** WUR - Wageningen University and Research Centre**CCAFS Partner(s) allocating budget**

CIMMYT - International Maize and Wheat Improvement Center - India

Contacts

Type	Contact	Responsibilities and contributions
Partner	Groot, Annemarie <annemarie.groot@wur.nl>	Activity 2014-258 *Leader*.

Partnerships overall performance over the last reporting period: This is a new flagship project started in 2015 itself with primarily new partners (ICRISAT, IFPRI, Wageningen University) and some new NARS. However, we have been working together with ICAR and SAUs since CCAFS phase I and they have played key role in developing and disseminating CSAPs. The new partners have brought excellent skills but due to some uncertainties of funds and repeated cuts, there were some issues and accordingly the the activities/deliverable were redesigned. Overall, the partnerships play a vital role in achieving outputs.

Lessons regarding your partnerships and possible implications for the coming reporting cycle: Working with diversity of partners across sites has been very fruitful in terms of capitalizing on vast expertise of multi-skill human resources to bring new knowledge and capacity and has been an excellent learning. But due to recent budget cuts we had to pull-apart few of them considering the deliverable priority and importance for overall project

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output.

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3. Locations

Project level	Latitude	Longitude	Name
Region	Not applicable	Not applicable	South Asia
Country	Not applicable	Not applicable	Bangladesh
Country	Not applicable	Not applicable	India
Country	Not applicable	Not applicable	Nepal

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

Guidelines and governance for LAPA emerging from the case studies in CSVs will help identifying CSAPs, business cases, incentives and institutional arrangements that encourage actors at all levels to invest more in CSA interventions. This will lead to enabling mechanism and environments for scaling-up CSA that will lead to [i] a 15% annual increase in investments on CSA by local and sub-national Governments, [ii] enhanced participation of the private sector in the scaling out of CSA with benefits for 1.0 million rural and urban men- and women-headed households in the 3 countries, and [iii] at least 10 International, regional and national developmental organizations using the CCAFS-informed tools, practices and policies for the prioritization of climate smart agriculture. Based on CCAFS informed outputs, the boundary partners and local bodies actively using evidence-based guidelines and strategies for LAPA and CSVs in policies and investment priorities for food security in all 2 countries.

Annual progress towards outcome (end of 2015): During 2015, the project will focus on documenting institutions, actors and policies supporting mainstreaming CSA at community level, potential CSA led business cases and LAPA guidelines and at least 1 local/sub-national bodies have adopted these

Annual progress towards project outcome in the current reporting cycle (2015): 1. State government of Haryana, India is using CCAFS-informed guidelines and framework of Local Adaptation Plan for Action (LAPA) for scaling CSAPs under the State Action Plan on Climate Change (SAPCC). As the LAPA guidelines and governance framework developed under CCAFS is first of its kind in India, the other sub-national and national Govt are keen to take this forward for scaling CSA

2. The CSA led business cases so developed and documented are providing excellent evidence base for attracting rural youth and will be help in scaling CSA. The farmer cooperative based innovation platforms developed under CCAFS are serving as excellent sites of learning and scaling CSA

3. Two success stories of the CSA practices (involving marginalized and women farmers) from evidences in CSVs are documented which have large potential for scaling-out by the local and sub-national Governments

Communication and engagement activities have contributed to achieving your Project outcomes: The strategic stakeholder engagement in developing, adapting and piloting CSA practices within CSV pilots, engaging youth and farmer cooperatives to serve as service window and enhanced capacity as well as community awareness campaigns benefited in achieving the project outcome. Multi-stakeholder participatory research with community based approach focused on women and youth as well as key development department was the key for capacity development and raising awareness.

Evidence documents of progress towards outcomes: <Not defined>

Annual progress towards outcome (end of 2016): Framework of CSA led business cases and at least one case study on LAPA/business case has been documented and shared with

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boundary partners and local governments/bodies

Annual progress towards outcome (end of 2017): Business plans for the short listed 'Potential business cases developed at Haryana, Bihar, Punjab and 1 site in Bangladesh and validated resulting into strengthening innovation platforms. Publications on business cases and policies supporting CSAPs. Strategic entry points identified for co-investments in CSA interventions

Annual progress towards outcome (end of 2018): <Not defined>

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: The early evidence on CSAPs from CSVs through engaging whole range of stakeholders and communities to demonstrate as how the investments on CSA interventions vis-a-vis on business as usual can make a difference under the unexpected climate risks and hence higher return over investment and a long-term strategy for food security. The farmer cooperatives and service window approach is excellent way to engage quality youth and scaling CSA innovations. The CSAP portfolios are better serving developing business cases rather than individual technologies/practices and hence has multiplier effects

4.2 Contribution to CCAFS Outcomes

RP SAs - Outcome 2019: Governments, private sector and farmer organizations increase their investments and develop incentive mechanisms to promote wide scale adoption of improved climate-smart practices and technologies

Indicator #1: FP1 Indicator: # of national and subnational development initiatives and public institutions that prioritize and inform project implementation of equitable best bet CSA options using CCAFS science and decision support tools

2019	
Target value: 1 million	Cumulative target to date: Cannot be Calculated
Target narrative: 1 million farmers implement portfolio of CSA practices and technologies for climate change adaptation in wheat and maize systems in Bangladesh, India and Nepal	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	

2015		
Target value: 1	Cumulative target to date: 1	Target achieved: 1.0

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2015	
Target narrative: <Not defined>	
Narrative for your achieved targets, including evidence: Large number of farmers implement portfolio of CSA practices and technologies for climate change adaptation in wheat and maize systems in India	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>	
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: it will also promote policy implementation environment that always involves women in male-headed household in case study planning and decision making	

2016	
Target value: 1	Cumulative target to date: 2
Target narrative: 200000 farmers implement portfolio of CSA practices and technologies for climate change adaptation in wheat and maize systems in Bangladesh, India	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: it will also promote a policy implementation environment that always involves women in male-headed households in case study planning and decision- making.	

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		
Narrative for your achieved targets, including evidence: <Not defined>		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>		

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways: <Not defined>

Collaborating with other CRPs

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Wheat

Description of collaboration: In WHEAT CRP Flagship Project on Sustainable Intensification, the practices portfolios so developed are quantified for their co-benefits on mitigation of the SI interventions. We feel that SI practices can serve the double purpose of SI + Mitigation = CSA.

The achieved outcome contributions: <Not defined>

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4.4 Outcome case studies

There is not an Outcome Case Study added.

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5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
<p>FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 4: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 1: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP1 - MOG # 2: 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)</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>

Major Output groups - 2014

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FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

Brief bullet points of your expected annual 2014 contribution towards the selected MOG

<Not defined>

Brief summary of your actual 2014 contribution towards the selected MOG:

<Not defined>

Brief 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>

FP1 - MOG # 4: 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 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>

FP1 - MOG # 1: 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 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>

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FP1 - MOG # 2: 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 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>

Major Output groups - 2015

FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

Developed incentive framework for multi-actor institutional mechanism for mainstreaming CSA interventions

Empowered local government bodies, rural women & youths as climate smart farmers to implement LAPA & scaling-out climate adaptation strategies

Brief 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 and social equity are taken into account as an approach towards scaling CSVs

Submitted on 2016-03-03 at 15:59 UTC

FP1 - MOG # 4: 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:

Synthesis report of local level incentives& policies supporting CSA for all CSV sites in India
Established innovation platform for LAPA in Haryana and Bihar
Establish local innovation platforms at Haryana, India

Brief 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 and social equity are taken into account as an approach towards scaling CSVs

FP1 - MOG # 1: 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:

Develop criteria and business assessment tool to identify and evaluate business opportunities/ barriers from CSA perspective
Identify lengthy list of CSAPs with potential business cases development in Haryana and Bihar, India
Action plans for developing business cases for promising CSAPs at Haryana, Bihar and Punjab, India

Brief 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 and social equity are taken into account as an approach towards scaling CSVs

Submitted on 2016-03-03 at 15:59 UTC

FP1 - MOG # 2: 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:

Framework, guidelines& governance structure for LAPA from case studies in established CSVs (Haryana, Bihar, Punjab)

Publications on evidence for synergies between LAPA&CSVs as strategy for climatechange adaptation and food security

Brief 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 and social equity are taken into account as an approach towards scaling CSVs

Major Output groups - 2016

FP1 - MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)

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

List of CSAPs/services with good potentials for business case development (Potential business cases) developed and thus. Business plans developed in Haryana, Bihar,Punjab& 1 site in Bangladesh.

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

In developing business models gender and social inclusion are considered vital.

FP1 - MOG # 4: 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

Local innovation platforms developed thereby empowering local government bodies,rural women&youths as climate smart farmers to implement LAPA&scaling-out climate adaptation strategies.

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

It will promote a policy implementation environment that always involves women in male-headed households in decision- making.

Submitted on 2016-03-03 at 15:59 UTC

FP1 - MOG # 1: 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

Business plans for the short listed 'Potential business cases developed at Haryana, Bihar, Punjab and 1 site in Bangladesh and validated resulting in strengthening innovation platforms. Publications on business cases and policies supporting CSAPs. Strategic entry points identified for co-investments in CSA interventions

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

It will promote a policy implementation environment that always involves women in male-headed households in case study planning and decision- making.

FP1 - MOG # 2: 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

Strengthened innovation platforms at the local level at Haryana, Bihar, Punjab and 1 site in Bangladesh

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

It will promote a policy implementation environment that always involves women in male-headed households in decision- making.

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

5.2 Deliverables

Deliverable #1

Main Information	
Title: Framework, guidelines& governance structure for LAPA from case studies in established CSVs (Haryana, Bihar, Punjab)	
MOG # 2: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Reference material
Year of expected completion: 2015	
Status: Complete	

Next-user
CCAFSFP1.1,NICRA,Local&sub-national level Govt bodies, farmer organizations, CSOs, private sector, (NAPCC), State Action Plan on Climate Change (SAPCC)
Knowledge, attitude, skills and practice changes expected in next-user: Understanding diversity of farming systems and livelihoods will strengthen capacity of stakeholders to better target CSA interventions and institutional mechanism
Greater awareness of LAPA and CSVs to support implementation of CSA interventions and services
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> • Participatory development of LAPA guidelines • Stakeholder consultations, workshops • Local community based innovation platforms • Communication materials for LAPA and CSA

Partners contributing to this deliverable
Partner #1 (Responsible): Aryal, Jeetendra <j.aryal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Submitted on 2016-03-03 at 15:59 UTC

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: cgspace
Dissemination URL: https://cgspace.cgiar.org/handle/10568/68326

Deliverable Metadata
<p>Description: Based on the extensive review of existing frameworks and practices on climate change adaptation and authors experiences in Indian context, this study presented BRIFFS (bottom-up, responsive, inclusive, flexible, forward-looking, and sustainable) as the major guidelines for developing LAPA. This study presented the major steps of LAPA with clear actions, activities and also tools that can be used in each step. The nine steps of LAPA are as follows: 1) Communicating climate change risks and adaptation measures at local level, 2) Assessment of climate risks and vulnerabilities and scoping of adaptation actions, 3) Prioritisation of adaptation options, 4) Formulation of LAPA, 5) LAPA integration in planning process, 6) Institutional arrangement to implement LAPA, 7) Implementation of LAPA, 8) Progress assessment of LAPA, and 9) Feedback and revision of LAPA.</p>
Creator / Authors: Aryal JP,Jat ML,Gehlawat SK,Agarwal T,Singh R
Author Identifier: <Not defined>
Publication / Creation date: 2015-09-29T07:19:39Z,2015-09-29T07:19:39Z,2015-09-29
Language: en
Coverage: <Not defined>

Deliverable Data sharing
<p>Deliverable files</p> <p><Not defined></p>

Deliverable #2

Main Information
Title: Established innovation platform for LAPA in Haryana and Bihar
<p>MOG # 4: 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)</p>

Submitted on 2016-03-03 at 15:59 UTC

Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: Review of the relevant literature to establish innovation platform is completed. Few discussions with the multiple stakeholders at Nor poor Bet village (a climate smart village at Ludhiana, Punjab) are held in relation to LAPA and innovation platform. Establishment of innovation platform requires the participation of multiple stakeholders.

Next-user
CCAFSFP1.1, NICRA, Local and sub-national level Govt bodies, farmer organizations, CSOs, private sector,(NAPCC), State Action Plan on Climate Change (SAPCC)
Knowledge, attitude, skills and practice changes expected in next-user: Understanding diversity of farming systems and livelihoods will strengthen capacity of stakeholders to better target CSA interventions and institutional mechanism
Greater awareness of LAPA and CSVs to support implementation of CSA interventions and services
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> • Participatory development of LAPA guidelines • Stakeholder consultations, workshops • Local community based innovation platforms • Communication materials for LAPA and CSA

Partners contributing to this deliverable
Partner #1 (Responsible): Aryal, Jeetendra <j.aryal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	3

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1

Submitted on 2016-03-03 at 15:59 UTC

Dissemination URL: [<Not defined>](#)

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #3

Main Information
Title: Empowered local government bodies,rural women&youths as climate smart farmers to implement LAPA&scaling-out climate adaptation strategies
MOG # 4: 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)
Main Type: Data and information outputs, including datasets, databases and models Sub Type: Databases
Year of expected completion: 2015
Status: Complete

Next-user
CCAFSFP1.1, NICRA,Local and sub-national level Govt bodies, farmer organizations, CSOs, private sector,(NAPCC), State Action Plan on Climate Change (SAPCC)
Knowledge, attitude, skills and practice changes expected in next-user: Understanding diversity of farming systems and livelihoods will strengthen capacity of stakeholders to better target CSA interventions and institutional mechanism
Greater awareness of LAPA and CSVs to support implementation of CSA interventions and services

Submitted on 2016-03-03 at 15:59 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:

- Participatory development of LAPA guidelines
- Stakeholder consultations, workshops
- Local community based innovation platforms
- Communication materials for LAPA and CSA

Partners contributing to this deliverable

Partner #1 (Responsible): Aryal, Jeetendra <j.aryal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	5
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination

Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: cgspace
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

[575-CSA Practice Brief-2015.pdf](#)
[575-Empowerment.pdf](#)

Submitted on 2016-03-03 at 15:59 UTC

Deliverable #4

Main Information	
Title: Publications on evidence for synergies between LAPA&CSVs as strategy for climatechange adaptation and food security	
MOG # 2: 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)	
Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2015	
Status: Complete	

Next-user
Local and sub-national government bodies, NGOs, CSOs, CBOs, private sector, policy planners, research, development institutions, CCAFS FP 1.1, 4.1, NICRA
Knowledge, attitude, skills and practice changes expected in next-user: Improved knowledge of decision-makers to develop investments plans an implement food security and development programs
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Stakeholder consultations and policy dialogues, Capacity development programs, communication materials, investment prioritization workshops

Partners contributing to this deliverable
Partner #1 (Responsible): Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research
Partner #2: Aryal, Jeetendra <j.aryal@cgjar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	4
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: other

Submitted on 2016-03-03 at 15:59 UTC

Dissemination URL: [<Not defined>](#)**Deliverable Metadata****Description:** Agricultural sustainability under emerging climatic variability: Role of climate smart agriculture and relevant policies in India**Creator / Authors:** Jeetendra P. Aryal, Tek B. Sapkota, ML Jat and Clare M. Stirling**Author Identifier:** <Not defined>**Publication / Creation date:** <Not defined>**Language:** <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing**[584-FOSE-S-16-00028.pdf](#)**Deliverable #5****Main Information****Title:** Develop criteria and business assessment tool to identify and evaluate business opportunities/barriers from CSA perspective**MOG # 1:** 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)**Main Type:** Reports, Reference Materials and Other Papers**Sub Type:** Research report**Year of expected completion:** 2015**Status:** Complete**Next-user**

Members of local innovation platforms, developers/users/service providers of CSAPs, stakeholders involved in marketing, retail or investments on technology led businesses.

Knowledge, attitude, skills and practice changes expected in next-user:

- Increased evidence-based knowledge on promising CSAPs/services in CSVs
- Increased knowledge on opportunities and barriers for business case development of prioritized CSAPs/services
- Increased skills to apply a business assessment tool
- Increased synergy between LAPA sand CSVs

Submitted on 2016-03-03 at 15:59 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: At local level (CSVs – LAPAs): Participatory development of framework for quickly scanning and mapping promising CSAPs in selected CSVs. Participatory mapping and prioritizing promising CSAPs with the use of the developed framework

- Compiling a long list of business opportunities
- Establishing innovation platforms:
- At regional level

Partners contributing to this deliverable

Partner #1 (Responsible): Aryal, Jeetendra <j.aryal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Partner #2: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Partner #3: Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Partner #4: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	4

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Deliverable Data sharing
criteria and business assessment tool.pdf

Deliverable #6

Main Information
Title: Identify lengthy list of CSAPs with potential business cases development in Haryana and Bihar, India
MOG # 1: 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)
Main Type: Reports, Reference Materials and Other Papers Sub Type: Research report
Year of expected completion: 2015
Status: Complete

Next-user
Members of local innovation platforms Developers/users/service providers of CSAPs, stakeholders involved in marketing, retail or investments on technology led businesses.
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> Increased evidence-based knowledge on promising CSAPs/services in CSVs Increased knowledge on opportunities and barriers for business case development of prioritized CSAPs/services Increased skills to apply a business assessment tool Increased synergy between LAPA sand CSVs
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: At local level (CSVs – LAPAs): Participatory development of a framework for quickly scanning and mapping promising CSAPs in selected LAPAs and CSVs. Participatory mapping and prioritizing promising CSA technologies and interventions with the use of the developed framework Compiling a long list of business opportunities: Establishing innovation platforms:

Partners contributing to this deliverable
Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre
Partner #2: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Submitted on 2016-03-03 at 15:59 UTC

Partner #3: Aryal, Jeetendra <j.aryal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Partner #4: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	4
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Lengthy list of CSA practices with potential for business development.pdf

Deliverable #7

Main Information
Title: Action plans for developing business cases for promising CSAPs at Haryana, Bihar and Punjab, India

Submitted on 2016-03-03 at 15:59 UTC

MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	

Next-user
Members of local innovation platforms, developers/users/service providers of CSAPs, stakeholders involved in marketing, retail or investments on technology led businesses.
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> Increased evidence-based knowledge on promising CSAPs/services in CSVs Increased knowledge on opportunities and barriers for business case development of prioritized CSAPs/services Increased skills to apply a business assessment tool Increased synergy between LAPA sand CSVs
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: At local level (CSVs – LAPAs): Participatory development of a framework for quickly scanning and mapping promising CSAPs in LAPAs and CSVs. Participatory mapping and prioritizing promising CSA technologies and interventions with the use of the developed framework Compiling a long list of business opportunities: Establishing innovation platforms:

Partners contributing to this deliverable
Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre
Partner #2: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Action plan for business case development.pdf

Deliverable #8

Main Information
Title: Establish local innovation platforms at Haryana, India
MOG # 4: 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)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Research report
Year of expected completion: 2015
Status: Complete

Next-user
Members of local innovation platforms, developers/users/service providers of CSAPs, stakeholders involved in marketing, retail or investments on technology led businesses.
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> Increased evidence-based knowledge on promising CSAPs/services in CSVs Increased knowledge on opportunities and barriers for business case development of prioritized CSAPs /services Increased skills to apply a business assessment tool Increased synergy between LAPA sand CSVs

Submitted on 2016-03-03 at 15:59 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: At local level (CSVs – LAPAs): Participatory development of a framework for quickly scanning and mapping promising CSAPs in selected LAPAs and CSVs.

Participatory mapping and prioritizing promising CSA technologies and interventions with the use of the developed framework

Compiling a long list of business opportunities: T

Establishing innovation platforms:

Partners contributing to this deliverable

Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Partner #2: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Partner #3: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	4
Potential for/ actual contribution to outcomes	3
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	4

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Deliverable Data sharing
List of CSAPs.pdf Local Innovation Platform Established.pdf

Deliverable #9

Main Information	
Title: A short list of CSAPs/services with good potentials for business case development (Potential business cases)	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: final listing is getting prepared

Next-user
Innovation platform members, researchers, development agents, CCAFSFP-1.1, NICRA
Knowledge, attitude, skills and practice changes expected in next-user: Increased knowledge and skills to develop business cases amongst innovation platform members Strengthened relationships amongst key partners in the potential business cases Change in mind set&attitude of key partners e.g. agricultural producers& services providers towards market led agriculture Change in mind set& positive attitude of private sector parties towards agribusiness
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Screening and prioritisation of long-listed business opportunities by innovation platforms Mobilising new platform members relevant for further development of Potential Business Cases Transforming Potential Business Cases into Business Cases Sharing of knowledge&experiences amongst innovation platforms within the country&across meta-innovation platform' involving members operating at the higher governance levels (national/state)

Partners contributing to this deliverable
Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
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Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #10

Main Information	
Title: Business plans for short listed 'Potential business cases in Haryana, Bihar,Punjab& 1 site in Bangladesh	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Models
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: business plan will be developed

Submitted on 2016-03-03 at 15:59 UTC

Next-user
Innovation platform members, researchers, development agents, CCAFSFP-1.1, NICRA
Knowledge, attitude, skills and practice changes expected in next-user: Increased knowledge and skills to develop business cases amongst innovation platform members Strengthened relationships amongst key partners in the potential business cases Change in mind set&attitude of key partners e.g. agricultural producers& services providers towards market led agriculture Change in mind set& positive attitude of private sector parties towards agribusiness
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Screening and prioritisation of long-listed business opportunities by innovation platforms Mobilising new platform members relevant for further development of Potential Business Cases Transforming Potential Business Cases into Business Cases Sharing of knowledge&experiences amongst innovation platforms within the country&across meta-innovation platform' involving members operating at the higher governance levels (national/state)

Partners contributing to this deliverable
Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Language: <Not defined>

Coverage: <Not defined>

Deliverable Data sharing**Deliverable files**

<Not defined>

Deliverable #11**Main Information**

Title: Strengthened innovation platforms at the local level at Haryana, Bihar, Punjab and 1 site in Bangladesh

MOG # 2: 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)

Main Type: Data and information outputs, including datasets, databases and models

Sub Type: Information outputs

Year of expected completion: 2016

Status: On-going

Justification for cancelling the deliverable: local innovation platforms developed will be strengthened

Next-user

Innovation platform members, researchers, development agents, CCAFSFP-1.1, NICRA

Knowledge, attitude, skills and practice changes expected in next-user: Increased knowledge and skills to develop business cases amongst innovation platform members
Strengthened relationships amongst key partners in the potential business cases
Change in mind set & attitude of key partners e.g. agricultural producers & services providers towards market led agriculture
Change in mind set & positive attitude of private sector parties towards agribusiness

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Screening and prioritisation of long-listed business opportunities by innovation platforms
Mobilising new platform members relevant for further development of Potential Business Cases
Transforming Potential Business Cases into Business Cases
Sharing of knowledge & experiences amongst innovation platforms within the country & across meta-innovation platform' involving members operating at the higher governance levels (national/state)

Partners contributing to this deliverable

Submitted on 2016-03-03 at 15:59 UTC

Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #12

Main Information
Title: Meta innovation platform established at the higher level in India and Bangladesh

Submitted on 2016-03-03 at 15:59 UTC

MOG # 4: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Information outputs
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: these will be established building on the existing platforms

Next-user
Innovation platform members, researchers, development agents, CCAFSFP-1.1, NICRA
Knowledge, attitude, skills and practice changes expected in next-user: Increased knowledge and skills to develop business cases amongst innovation platform members Strengthened relationships amongst key partners in the potential business cases Change in mind set&attitude of key partners e.g. agricultural producers& services providers towards market led agriculture Change in mind set& positive attitude of private sector parties towards agribusiness
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Screening and prioritisation of long-listed business opportunities by innovation platforms Mobilising new platform members relevant for further development of Potential Business Cases Transforming Potential Business Cases into Business Cases Sharing of knowledge&experiences amongst innovation platforms within the country&across meta-innovation platform' involving members operating at the higher governance levels (national/state)

Partners contributing to this deliverable
Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #13

Main Information
Title: Validation of selected CSAPs led business cases at Haryana, Bihar, Punjab& 1 site in Bangladesh
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)
Main Type: Data and information outputs, including datasets, databases and models
Sub Type: Datasets
Year of expected completion: 2016
Status: On-going
Justification for cancelling the deliverable: validation will be done

Next-user
Innovation platform members, researchers, development agents, CCAFSFP-1.1, NICRA
Knowledge, attitude, skills and practice changes expected in next-user: Increased knowledge and skills to develop business cases amongst innovation platform members Strengthened relationships amongst key partners in the potential business cases Change in mind set&attitude of key partners e.g. agricultural producers& services providers towards market led agriculture Change in mind set& positive attitude of private sector parties towards agribusiness

Submitted on 2016-03-03 at 15:59 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Screening and prioritisation of long-listed business opportunities by innovation platforms
 Mobilising new platform members relevant for further development of Potential Business Cases
 Transforming Potential Business Cases into Business Cases
 Sharing of knowledge&experiences amongst innovation platforms within the country&across meta-innovation platform' involving members operating at the higher governance levels (national/state)

Partners contributing to this deliverable

Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
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Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
 <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Deliverable #14

Main Information	
Title: Stories describing the lessons learnt on developing business cases in Haryana, Bihar, Punjab and Bangladesh	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2017	
Status: On-going	Justification for cancelling the deliverable: reports will be made

Next-user
Innovation platform members and meta-platform members
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> Farmer cooperatives/organizations and service providers will target and plan their services in specific domains/ times to engage in CSA intervention-led businesses Policy makers will design and plan policies in specific domains/ times in order to promote CSA-intervention led businesses Greater engagement of private sector with agribusiness
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> Implementation of business plans by innovation platform members Participatory monitoring of the development of CSA Business cases Participatory selection of CSA Business Cases and assess their potential impact Knowledge sharing amongst innovation platforms and meta-platforms within the country and across

Partners contributing to this deliverable
Partner #1 (Responsible): Joshi, PK <p.joshi@cgiar.org>, IFPRI - International Food Policy Research Institute
Partner #2: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research
Partner #3: Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre
Partner #4: Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #15

Main Information	
Title: Strategy for scaling (local) CSA Business cases in Haryana, Bihar, Punjab and Bangladesh	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2017	
Status: On-going	Justification for cancelling the deliverable: evidence based strategy will be documented

Submitted on 2016-03-03 at 15:59 UTC

Next-user
Innovation platform members and meta-platform members
Knowledge, attitude, skills and practice changes expected in next-user: • Farmer cooperatives/organizations/service providers will target and plan their services in specific domains/times to engage in CSA intervention-led businesses
<ul style="list-style-type: none"> • Policy makers will design and plan policies in specific domains/times to promote CSA-intervention led businesses • Greater engagement of private sector with agribusiness which will increase marketing opportunities and profitability
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: • Implementation of business plan activities by innovation platform members
<ul style="list-style-type: none"> • Participatory monitoring of the development of CSA Business cases • Participatory selection of final CSA Business Cases • Assessment of the expected impact of scaling CSA Business Cases on productivity, food security, income, equity, mitigation and adaptation

Partners contributing to this deliverable
Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre
Partner #2: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research
Partner #3: Director, Executive <dir-aic@barc.gov.bd>, BARC - Bangladesh Agricultural Research Council
Partner #4: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

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Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #16

Main Information
Title: Launch of Innovative CSA Business Cases for CSA technologies and interventions at India and Bangladesh
MOG # 1: 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)
Main Type: Data and information outputs, including datasets, databases and models
Sub Type: Data
Year of expected completion: 2018
Status: On-going
Justification for cancelling the deliverable: innovative business cases will be launched by 2018

Next-user
Innovation platform members, meta-platform members, Other policy makers, service providers & private sector parties at national level • Investors, marketing & retail stakeholders at international level
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> Farmer cooperatives/organizations and service providers will target and plan their services in specific domains/ times to engage in CSA intervention-led businesses Policy makers will design and plan policies in specific domains/ times in order to promote CSA-intervention led businesses Greater engagement of private sector with agribusiness

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Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Alimplementation of business plans by innovation platform members

- Participatory monitoring of the development of CSA Business cases
- Participatory selection of CSA Business Cases and assess their potential impact
- Knowledge sharing amongst innovation platforms and meta-platforms within the country and across

Partners contributing to this deliverable

Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

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License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Deliverable #17

Main Information	
Title: Synthesis report of local level policies&incentives supporting CSA for 3 CSV sites(Haryana, Punjab and Bihar)	
MOG # 1: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	

Next-user
Scientists and research organizations, academies, local government bodies, universities, CSOs, policy planners
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> • Better understanding of local level policies and incentives for promoting CSA • Enhanced capacity of local level research and development agents for mainstreaming CSA in local development plans
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Capacity development of research and development agents, new tools and technique (for example ICTs) for sharing information on incentives and knowledge on CSA

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	4

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>

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Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
missing link- policies-ASS-Aug 2015.pdf

Deliverable #18

Main Information
Title: Synthesis report of local level incentives& policies supporting CSA for all CSV sites in India
MOG # 1: 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)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Research report
Year of expected completion: 2015
Status: Complete

Next-user
Scientists and research organizations, academies, local government bodies, universities, CSOs, policy planners
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> • Better understanding of local level policies and incentives for promoting CSA • Enhanced capacity of local level research and development agents for mainstreaming CSA in local development plans

Submitted on 2016-03-03 at 15:59 UTC

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: • Capacity development of research and development agents, new tools and technique (for example ICTs) for sharing information on incentives and knowledge on CSA

Partners contributing to this deliverable

Partner #1 (Responsible): Joshi, PK <p.joshi@cgiar.org>, IFPRI - International Food Policy Research Institute

Partner #2: Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	4

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Deliverable #19

Main Information	
Title: Strategic entry points identified for prioritization and synergies for co-investments in CSAPs under LAPA, CSVs	
MOG # 4: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: Complete	

Next-user
Scientists and research organizations, academies, local government bodies, universities, CSOs, policy planners.
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> • Better understanding of local level policies and incentives for promoting CSA • Enhanced capacity of local level research and development agents for mainstreaming CSA in local development plans
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> • Capacity development of research and development agents, new tools and technique (for example ICTs) for sharing information on incentives and knowledge on CSA

Partners contributing to this deliverable
Partner #1 (Responsible): Aryal, Jeetendra <j.aryal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Joshi, PK <p.joshi@cgiar.org>, IFPRI - International Food Policy Research Institute
Partner #3: Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #4: Sikka, A.K <aksikka@icar.org.in>, ICAR - Indian Council of Agricultural Research

Deliverable Ranking	
Address gender and social inclusion aspect	4
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	5

Submitted on 2016-03-03 at 15:59 UTC

What is your personal perspective of the importance of this product	5
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Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
601-Jat et al-Laser Assisted Precision Land Leveling.pdf
601-Socio-economic Factors Affecting Modern ICT.pdf

Deliverable #20

Main Information	
Title: Developed incentive framework for multi-actor institutional mechanism for mainstreaming CSA interventions	
MOG # 1: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Information outputs
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: Due to budget cut the deliverable could not conceptualize completely, but there is work going on and we will report it in 2016

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Next-user
Scientists and research organizations, academies, local government bodies, universities, CSOs, policy planners
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> Better understanding of local level policies and incentives for promoting CSA Enhanced capacity of local level research and development agents for mainstreaming CSA in local development plans
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> Capacity development of research and development agents, new tools and technique (for example ICTs) for sharing information on incentives and knowledge on CSA

Partners contributing to this deliverable
Partner #1 (Responsible): Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #21

Main Information
Title: Synthesis report of local level incentives and policies supporting CSA for CSV sites in Bangladesh
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Research report
Year of expected completion: 2016
Status: Complete

Next-user
Scientists and research organizations, academies, local government bodies, universities, CSOs, policy planners
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> Better understanding of local level policies and incentives for promoting CSA Enhanced capacity of local level research and development agents for mainstreaming CSA in local development plans
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> Capacity development of research and development agents, new tools and technique (for example ICTs) for sharing information on incentives and knowledge on CSA

Partners contributing to this deliverable
Partner #1 (Responsible): Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	4
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Submitted on 2016-03-03 at 15:59 UTC

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: other
Dissemination URL: http://www.ccsenet.org/journal/index.php/ass/article/view/49944

Deliverable Metadata
<p>Description: Government of India has recently announced for special funds like National adaptation fund to handle market risks arising due to climatic variability. The operational protocol of this fund and other forthcoming initiatives have yet to be expanded, but through this paper we like to draw attention to some of the policies and programmes that the Governments of India have already initiated and that directly or indirectly link to managing the risks and challenges faced with climate change in context of agriculture sector. These policies have their own merits and demerits, but it is the need of the hour to draw synergies between the existing policies and new proposed actions to draw on the strengths of the ongoing programs and build up on that. This paper is also relevant in the context of UN Climate summit 2014 held on 23rd September and Food and Agriculture Organisation (FAO) aim at a global alliance for climate smart agriculture along with India's prime ministers speech on 15th august, 2015 and the budget speech emphasising on threat that agriculture is facing because of climate change and government willingness to give emphasis on this agenda in context of agricultural sector. With the critical analysis, we also want to highlight the richness in the policy framework of several policies which are interlinked with each other, but due to lack of coordination they implementation might not be very appropriate.</p>
Creator / Authors: Surabhi Mittal & Srabashi Ray
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
<p>Deliverable files <Not defined></p>

Deliverable #22

Main Information
<p>Title: Strategic entry points identified for prioritization&synergies for co-investments in CSA interventions under CSVs in Bangladesh.</p>
<p>MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)</p>

Submitted on 2016-03-03 at 15:59 UTC

Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: study is undertaken to recognize entry points

Next-user
Scientists and research organizations, academies, local government bodies, universities, CSOs, policy planners
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> • Better understanding of local level policies and incentives for promoting CSA • Enhanced capacity of local level research and development agents for mainstreaming CSA in local development plans
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> • Capacity development of research and development agents, new tools and technique (for example ICTs) for sharing information on incentives and knowledge on CSA

Partners contributing to this deliverable
Partner #1 (Responsible): Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
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Creator / Authors: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #23

Main Information
Title: Incentive framework for institutions to mainstream CSA interventions validated at village and sub-national level
MOG # 2: 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)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Research report
Year of expected completion: 2017
Status: On-going
Justification for cancelling the deliverable: this will be linked to the ongoing activities

Next-user
Research and development organizations, local and sub-national Governments, local community organizations, policy planners, private investors
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> • Greater awareness of CSA interventions and priority of investments in CSA • Better understanding of convergence and synergy of investments in CSA at local level
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> • Capacity development of Research institutions and local developmental organizations • Policy dialogues/workshops involving range of stakeholders

Partners contributing to this deliverable
Partner #1 (Responsible): Joshi, PK <p.joshi@cgiar.org>, IFPRI - International Food Policy Research Institute

Submitted on 2016-03-03 at 15:59 UTC

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #24

Main Information	
Title: Validation results of prioritized strategic entry points for linkages of LAPA and CSVs	
MOG # 1: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data

Submitted on 2016-03-03 at 15:59 UTC

Year of expected completion: 2017	
Status: On-going	Justification for cancelling the deliverable: report will be published

Next-user
Research and development organizations, local and sub-national Governments, local community organizations, policy planners, private investors
Knowledge, attitude, skills and practice changes expected in next-user: <ul style="list-style-type: none"> • Greater awareness of CSA interventions and priority of investments in CSA • Better understanding of convergence and synergy of investments in CSA at local level
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: <ul style="list-style-type: none"> • Capacity development of Research institutions and local developmental organizations • Policy dialogues/workshops involving range of stakeholders

Partners contributing to this deliverable
Partner #1 (Responsible): Aryal, Jeetendra <j.aryal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Language: <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing****Deliverable files**

<Not defined>

Deliverable #25**Main Information****Title:** Local bodies using evidence-based adaptation domains for LAPA&CSVs in sub-national level policies&investment priorities for food-security**MOG # 1:** 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)**Main Type:** Data and information outputs, including datasets, databases and models**Sub Type:** Data**Year of expected completion:** 2017**Status:** On-going**Justification for cancelling the deliverable:**
Govt. of Haryana is already adapting to scaling up CSVs and we are working towards additional government bodies using the LAPA and CSVs**Next-user**

Research and development organizations, local and sub-national Governments, local community organizations, policy planners, private investors

Knowledge, attitude, skills and practice changes expected in next-user: • Greater awareness of CSA interventions and priority of investments in CSA

- Better understanding of convergence and synergy of investments in CSA at local level

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: • Capacity development of Research institutions and local developmental organizations

- Policy dialogues/workshops involving range of stakeholders

Partners contributing to this deliverable**Partner #1 (Responsible):** Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Submitted on 2016-03-03 at 15:59 UTC

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #26

Main Information	
Title: Policy briefs on incentives&investment guidelines for increasing resilience&adaptive capacity of farming systems within CSVs framework	
MOG # 2: 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)	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Policy briefs - Briefing paper

Submitted on 2016-03-03 at 15:59 UTC

Year of expected completion: 2018	Justification for cancelling the deliverable:
Status: On-going	Policy briefs will be documented by 2018 as per work done and learnings t

Next-user
Policy planners, local and sub-national Governments, Research Organizations, CSOs and farmer organizations, CCAFS FP 4.1, NICRA, SAPCC, NAPCC
Knowledge, attitude, skills and practice changes expected in next-user: • Policy planners, development agents and farmer organizations at local and sub-national level have better understating of convergence and synergies of investments at local level to contribute to climate change adaptation, minimize climatic risks to ensure sustainable food security at household and national level
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: • Evidence based policy dialogues, workshops, policy briefs involving range of stakeholders

Partners contributing to this deliverable
Partner #1 (Responsible): Joshi, PK <p.joshi@cgiar.org>, IFPRI - International Food Policy Research Institute

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #27

Main Information
Title: Policy briefs on strengthening mechanism for local institutions for supporting scaling-out CSA interventions, services&incentives
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)
Main Type: Reports, Reference Materials and Other Papers
Sub Type: Policy briefs - Briefing paper
Year of expected completion: 2018
Status: On-going
Justification for cancelling the deliverable: policy brief will be documented

Next-user
Policy planners, local and sub-national Governments, Research Organizations, CSOs and farmer organizations, CCAFS FP 4.1, NICRA, SAPCC, NAPCC
Knowledge, attitude, skills and practice changes expected in next-user: • Policy planners, development agents and farmer organizations at local and sub-national level have better understating of convergence and synergies of investments at local level to contribute to climate change adaptation, minimize climatic risks to ensure sustainable food security at household and national level
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: • Evidence based policy dialogues, workshops, policy briefs involving range of stakeholders

Partners contributing to this deliverable
Partner #1 (Responsible): Joshi, PK <p.joshi@cgiar.org>, IFPRI - International Food Policy Research Institute

Deliverable Ranking
Address gender and social inclusion aspect
<Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #28

Main Information	
Title: Peer reviewed journal articles on framework and mechanism for scaling-out of CSA interventions and services	
MOG # 3: Approaches, strategies and scaling up/out mechanisms (e.g CSV), for enhanced adaptive capacity and resilience from the field to the sub-national level (LAM, WA, SA, EA, SEA)	
Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2018	
Status: On-going	Justification for cancelling the deliverable: publications will be made

Submitted on 2016-03-03 at 15:59 UTC

Next-user
Policy planners, local and sub-national Governments, Research Organizations, CSOs and farmer organizations, CCAFS FP 4.1, NICRA, SAPCC, NAPCC
Knowledge, attitude, skills and practice changes expected in next-user: • Policy planners, development agents and farmer organizations at local and sub-national level have better understating of convergence and synergies of investments at local level to contribute to climate change adaptation, minimize climatic risks to ensure sustainable food security at household and national level
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: • Evidence based policy dialogues, workshops, policy briefs involving range of stakeholders

Partners contributing to this deliverable
Partner #1 (Responsible): Joshi, PK <p.joshi@cgiar.org>, IFPRI - International Food Policy Research Institute

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Submitted on 2016-03-03 at 15:59 UTC

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #29

Main Information	
Title: A publication (report, research paper, policy brief) on business cases	
MOG # 1: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: survey has been done and report writing is in progress

Next-user
CCAFS FP 1.2, 1.3, 2, 4.1, Civil society organizations, Advanced research institutions, Policy planners in governments at different levels
Knowledge, attitude, skills and practice changes expected in next-user: Integrating the deliverables into climate and agricultural policies
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Screening and prioritisation of the long-listed business opportunities by the innovation platforms (by using pitches, Dragons den style sessions) Depending on identified opportunities and barriers for business development, actions of the innovation platforms may include discussions and investigations

Partners contributing to this deliverable
Partner #1 (Responsible): Groot, Annemarie <annemarie.groot@wur.nl>, WUR - Wageningen University and Research Centre

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>

Submitted on 2016-03-03 at 15:59 UTC

What is your personal perspective of the importance of this product	<Not defined>
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Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #30

Main Information	
Title: A peer reviewed publication on policies supporting scaling of CSAPs in India	
MOG # 1: 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)	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: scientific writing is in progress

Next-user

Submitted on 2016-03-03 at 15:59 UTC

Research and development organizations, local and sub-national Governments, local community organizations, policy planners, private investors

Knowledge, attitude, skills and practice changes expected in next-user: Greater awareness of CSA interventions and priority of investments in CSA. Better understanding of convergence and synergy of investments in CSA at local level

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:

- Capacity development of Research institutions and local developmental organizations
- Policy dialogues/workshops involving range of stakehold

Partners contributing to this deliverable

Partner #1 (Responsible): Director, Executive <dir-aic@barc.gov.bd>, BARC - Bangladesh Agricultural Research Council

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Submitted on 2016-03-03 at 15:59 UTC

Deliverable files

<Not defined>

5.3 Summary on next-users

Next user #1
<p>Key next user for the current reporting period. Key game changers. Observed Knowledge, Attitude, Skills and practice changes: CAFSFP1.1, NICRA, Local and sub-national level Govt bodies, farmer organizations, CSOs, private sector, (NAPCC), State Action Plan on Climate Change (SAPCC). Scientists and research organizations, academies, local government bodies, universities, CSOs, policy planners</p> <p>Understanding diversity of farming systems and livelihoods will strengthen capacity of stakeholders to better target CSA interventions and institutional mechanism. Greater awareness of LAPA and CSVs to support implementation of CSA interventions and services. Improved knowledge of decision-makers to develop investments plans an implement food security and development programs.</p> <ul style="list-style-type: none"> • Increased evidence-based knowledge on promising CSAPs/services in CSVs • Increased knowledge on opportunities and barriers for business case development of prioritized CSAPs /services • Increased skills to apply a business assessment tool • Increased synergy between LAPA sand CSVs
<p>Strategies (facilitation, engagement, knowledge sharing etc.) you used to encourage and enable this next user to utilize deliverables and adopt changes: Capacity development of research and development agents, new tools and technique (for example ICTs) for sharing information on incentives and knowledge on CSA</p> <p>At local level (CSVs – LAPAs): Participatory development of framework for quickly scanning and mapping promising CSAPs in selected CSVs. Participatory mapping and prioritizing promising CSAPs with the use of the developed framework</p> <ul style="list-style-type: none"> • Compiling a long list of business opportunities • Establishing innovation platforms at regional level • Stakeholder consultations, workshops • Local community based innovation platforms • Communication materials for LAPA and CSA
<p>Reported deliverables serve as evidence towards this achieved change: The evidence from CSVs, peer reviewed publications, policy level dialogues and enhanced capacity and awareness of stakeholders</p>
<p>Lessons and implications for the next planning cycle: Engaging next users in the process of CSV pilots and real time sharing of evidence as how CSAPs are helping in addressing climate risks for example we shared the role of CSAPs in reducing risks of excess rains on wheat yield compared to business as usual in North-West India during 2015.</p>

Submitted on 2016-03-03 at 15:59 UTC

5.4 Project highlights

Submitted on 2016-03-03 at 15:59 UTC

6. Activities

Activity #1	
Title: Guidelines, capacity, governance, recommendation domains and synergies for LAPA and CSVs for scaling CSAPs	
Description: The development and application of methods and approaches for equitable local adaptation planning and targeting relevant CSA interventions requires understanding of diversity of farming systems, local institutions, infrastructure, investments and potential effect of CSAPs on livelihoods. Studies under this activity will be focussed developing guidelines and framework for LAPA for linking the lessons learnt through current CSA experiences in CSVs with LAPA frameworks through mainstreaming incentives and institutions to accelerate adoption of CSA interventions. LAPA guidelines will be developed through multi-stakeholder approach involving communities and institutional arrangements at local level through documenting community level CSA learnings in CSVs. For scaling CSAPs will be evaluated in terms of relevant indicators (food security, income opportunities, gender & social equity, mitigation) for different farm household types and communities, allowing them to identify main potential leverages and obstacles for adoption of CSAP portfolios. Innovative tools and techniques will be used for linking LAPA and CSVs.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2015
Leader: Aryal, Jeetendra <j.aryal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: Complete	

Activity #2	
Title: Developing and defining innovative business models and open innovation platforms for scaling CSAPs	
Description: This activity involves an iterative process to scan, define and address opportunities and barriers for developing, piloting and scaling business cases for CSAPs. Innovation platforms will be established around CSAPs. At the local level, these innovation platforms consist of developers of CSAPs, customers of the CSAPs (in CSVs) and, stakeholders from marketing, retail, investment and policy domains. Second, meta-innovation platform, involve members operating at higher governance levels e.g. investors, policy makers, national research/extension institutes, NGOs and local innovation platforms. Innovation platforms will lead in the development, piloting and scaling-up of climate smart agri-business models. Principle approach is to capture and further develop agri-business opportunities at local level and scaling-up these business opportunities to a higher spatial level. A geographically differentiated approach of CSA measures and strategies will be adopted for identification of Business Opportunities', 'defining Potential Business Cases', 'transforming them into actual Business Cases' and piloting and scaling these businesses'.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Jat, ML <m.jat@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	

Submitted on 2016-03-03 at 15:59 UTC

Status: On-going	<p>Justification: Despite of delay in the launch of the project, very good progress has been made. The base line survey and several field visits contributed to insights into opportunities and barriers to develop business models for CSA technologies.</p> <p>More interactions with the Farmer cooperative Noorpur - Bet and others are needed to establish action plans specifying ambitions, value propositions for producers and customers as well as roles and tasks. These action plans will be developed as part of the transformation of potential business cases into real business cases. We will launch these platforms after choices for viable business cases.</p>
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Activity #3

<p>Title: Develop incentive based policy instruments that influence farmer's households trajectories towards better adaptation to climate change</p>	
<p>Description: This activity aims at mainstreaming incentives through evolving enabling policies and innovative institutions for promoting CSA interventions & services within the framework of CSVs. Incentive based policy instruments will be recommended based on robust science-based evidence that influences the trajectory of farmers for better adaptation to climate change. The activity will also focus on understanding incentives and institutional arrangements for CSV governance for empowering local communities to adopt and scale-out CSAPs. The recommendations will feed into local and sub-national policy that will be instrumental in influencing farm households to increase adoption of CSAPs and improve ability to adapt to production and marketing risks of climate change. The output will develop policy instruments and mechanism that ensure equal participation of 25-50% marginalized groups and 30-50% female-headed households in CSA development activities. It will also promote a policy implementation environment that always involves women in male-headed households in case study planning and decision-making.</p>	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
<p>Leader: Mittal, Surabhi <s.mittal@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center</p>	
<p>Status: Complete</p>	

Lessons regarding your project activities and possible implications for the coming planning cycle: There is need to find the right balance between CSA technology-led and demand-driven business development. In both approaches farmers cooperatives can be accelerators of scaling climate smart technologies and practices. Such a value chain perspective builds on the recognition that customers can no longer be seen as mere buyers of services. They co-develop and co-produce new services in partnership with suppliers and other parties in a value chain.

Submitted on 2016-03-03 at 15:59 UTC

7. Leverages

<Not defined>

Submitted on 2016-03-02 at 13:29 UTC

Title: Integrated Agricultural Production and Food Security Forecasting System for East Africa

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

Project is working on

Flaship(s)	Region(s)
FP2: Climate Information Services and Climate-Informed Safety Nets	RP EA: East Africa

Bilateral project(s) contributing to this project
140 - Integrated Agricultural Production and Food Security Forecasting System for East Africa
190 - The Agricultural Modeling Intercomparison and Improvement project (AgMIP) - Regional Integrated Assessments in SSA and SA

Summary

The food security of millions of people in EA has been undermined by the negative impacts of climate shocks on the predominantly rain-fed agriculture; further threatened by the expected increase in frequency and severity of the shocks under climate change. Current climate and food security monitoring and forecasting systems in the region are crude and do not fully satisfy the needs of practical users. This project aims to develop a robust, scientifically sound but user-friendly food security forecasting system for EA. The project involves several partners from the climate, research, development, early warning and relief sectors. This will allow regional and national weather/disaster risk reduction offices to provide accurate and spatially dis-aggregated early warnings to local and national governments, donors, and relief agencies to respond in a timely and efficient manner. This will reduce costs, save lives and enhance long-term climate risk management and policy options in the region.

Submitted on 2016-03-02 at 13:29 UTC

2. Partners

Partner #1

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

Contacts

Type	Contact	Responsibilities and contributions
Partner	Claessens, Lieven <l.claessens@cgiar.org>	Collect the required data and calibrate and evaluate crop models for sorghum production forecasting (activity #3), contribute to activity #4, organizes one of the three workshops planned and involves in the capacity development of national partners (activity #6), and actively collaborates with project partners in the planning and execution of the project. Activity 2014-126 *Partner*. Activity 2014-247 *Partner*. Activity 2014-255 *Partner*. Activity 2014-272 *Partner*. Activity 2014-370 *Partner*.

Partner #2

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contacts

Type	Contact	Responsibilities and contributions
Partner	Sommer, Rolf <r.sommer@cgiar.org>	Collect required data and calibrate and evaluate crop models for common bean production forecasting (activity #3), leads activity #5, and collaborates with partners on the integrated food security forecasting tool development, organizes one of the three workshops planned and involves in the training of national partners (activity #6). Actively collaborates with project partners in the planning and execution of the project. Activity 2014-247 *Partner*. Activity 2014-272 *Partner*. Activity 2014-370 *Partner*.
Partner	Girvetz, Evan <e.girvetz@cgiar.org>	Activity 2014-271 *Leader*.

Partner #3

Institution: ICPAC - IGAD Climate Prediction and Applications Centre

Submitted on 2016-03-02 at 13:29 UTC

CCAFS Partner(s) allocating budget: <Not defined>**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Artan, Guleid <gartan@icpac.net>	Improve the skill and resolution of seasonal climate forecasts for the East Africa Region and provide gridded forecast data for crop model input (lead activity #2). Links the project with national partners (national meteorology services and disaster risk management and food security offices), build the capacity of the national partners, organize feedback from the national partners and host as well as disseminate (to the national partners) the final product of the project. Actively collaborates with project partners in the planning and execution of the project. Activity 2014-272 *Partner*.
Partner	KK Atheru, Zachary <zatheru@icpac.net>	Mobilizes leverage funds. Activity 2014-370 *Partner*. Activity 2014-235 *Leader*.

Partner #4**Institution:** PEP - Partnership for Economic Policy**CCAFS Partner(s) allocating budget:** <Not defined>**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Shiferaw, Bekele <b.shiferaw@pep-net.org>	Contribute to the detailed review and evaluation of existing food security assessment methods and tools (leads activity #1), communicate major findings of the report to project team members, and regional and national partners through stakeholder workshops and contribute to publication of the review findings. Lead the activity on modeling of food security at national and sub-national levels (activity #4). Activity 2014-126 *Partner*. Activity 2014-272 *Partner*. Activity 2014-370 *Partner*. Activity 2014-255 *Leader*.

Partner #5**Institution:** WFP - World Food Programme

Submitted on 2016-03-02 at 13:29 UTC

CCAFS Partner(s) allocating budget: <Not defined>**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Vhurumuku, Elliot <elliot.vhurumuku@wfp.org>	Involves in modeling of food security at regional, national and sub-national levels (activity #4), contributes to the review of literature on food security assessment methods and tools (activity #1) and actively collaborates with project partners in the planning and execution of the project. Provide inputs to the development of the integrated food security forecasting tool from the user perspective. Activity 2014-126 *Partner*. Activity 2014-255 *Partner*. Activity 2014-272 *Partner*. Activity 2014-370 *Partner*.

Partner #6 (Leader)**Institution:** CIMMYT - International Maize and Wheat Improvement Center**Contacts**

Type	Contact	Responsibilities and contributions
Project Leader	Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>	Contribute to the development of the integrated food security forecasting tools particularly in improving the CRAFT tool. Activity 2014-271 *Partner*. Activity 2014-272 *Leader*. Activity 2014-247 *Leader*. Activity 2014-370 *Leader*.

Partner #7**Institution:** CIMMYT - International Maize and Wheat Improvement Center**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Gbegbelegbe, Sika <g.sika@cgiar.org>	Data collection at different levels, food security forecasting and modeling using CGE model and contribute to outcome reports. Activity 2014-126 *Leader*.

Submitted on 2016-03-02 at 13:29 UTC

Partnerships overall performance over the last reporting period: The project brought together partners from the research (CIMMYT, ICRISAT, PEP), climate and early warning (ICPAC and FEWS NET) and relief (WFP) sectors and national partners creating a unique collaborative environment to achieve a common goal. The partners involved in this project contributed enthusiastically to achieving the 2015 deliverables. Each of the partner contributed to the project with positive team spirit even during the challenges of budget cuts.

Lessons regarding your partnerships and possible implications for the coming reporting cycle: Partnerships are important to bring together different interests, skills and resources. Partnerships last longer even under difficult circumstances if they are based on institutional commitments. The partners in this project were able to work and deliver together despite repeated budget cuts and limited resources. The partners are committed to achieve the stated project outcomes if the project is funded for the coming years.

Submitted on 2016-03-02 at 13:29 UTC

3. Locations

Project level	Latitude	Longitude	Name
Country	Not applicable	Not applicable	Ethiopia
Country	Not applicable	Not applicable	Kenya

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

National (weather services and disaster risk management and food security sector offices) and regional (ICPAC, WFP, FEWSNET) early warning institutions access and use research informed food security forecasting tool to provide accurate, reliable and spatially disaggregated early warning information for timely and efficient food security decision-making in at least three east African countries which help protect the lives of vulnerable households from climate disasters and reduce depletion of assets during climate shocks.

Annual progress towards outcome (end of 2015): The diverse group of partners involved (CIMMYT, CIAT, ICRISAT, ICPAC, PEP, WFP, FEWSNET) and national stakeholders (meteorological services and disaster management and food security offices) in the project countries will have improved inter-institutional communication and build their capacity of joint planning, executing and applying climate, production and food security forecasts. To achieve this, project inception and planning workshop and expert group meetings will be organized in 2015. Moreover, strengths and weaknesses of existing early warning tools, early warning information delivery mechanisms and improvements needed will be identified.

Annual progress towards project outcome in the current reporting cycle (2015): The diverse group of partners involved (CIMMYT, ICRISAT, ICPAC, PEP, WFP, FEWSNET) in the project and national stakeholders in the project countries (meteorological services and disaster management and food security offices) strengthened inter-institutional communication which laid the foundation for joint planning and executing agreed activities. Project inception and planning workshops, progress review team meetings, presentation at the Greater Horn of Africa Climate Outlook Forum (GHACOF) and regular communications among project team members in 2015 helped in improving institutional collaboration. Data have been also collected from different sources on the strengths and weaknesses of existing early warning tools, and early warning information delivery mechanisms in East Africa.

Communication and engagement activities have contributed to achieving your Project outcomes: Project awareness has been created through inception and planning workshop that brought together project partners, national stakeholders (national climate service agencies and disaster management and food security offices), and NGOs working in the region; the proceeding of workshop was shared with national partners and GOs in the region; the INAPFS project was presented at the the Greater Horn of Africa Climate Outlook Forum (GHACOF41) which brought together experts from policy, climate, agriculture, food security, relief, disaster management sectors from the IGAD region; and regular project progress review meetings were conducted by the project team in 2015.

Evidence documents of progress towards outcomes: [2015 Summary Report-CIMMYT02102016.pdf](#)

Annual progress towards outcome (end of 2016): The IGAD Climate Predication and Application Center (ICPAC) improves its seasonal climate forecasting system and supports three national meteorological service agencies in the project countries to provide credible ago-advisories. Calibrated and evaluated crop models are also tested for spatial crop

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production forecasting in two project countries.

Annual progress towards outcome (end of 2017): ICPAC in collaboration with national meteorological services in three project countries provide refined seasonal climate forecasts, and gridded climate data. Two national disaster risk management and food security offices in two project countries and WFP test and use the production forecast tool for early warning decision making at different levels.

Annual progress towards outcome (end of 2018): The project may not achieve its stated outcomes for 2018 because of budget cuts but it will contribute to disaster risk management in the EA region, particularly in Ethiopia and Kenya, as a result of publications that will come out of the 2015 and 2016 activities.

Lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them: There is no change in our TOC, and if we continue the project as planned we think that it is possible to achieve the project outcomes as planned. However, we also learn that availability of resources are important to maintain partnerships and attain project outcomes.

4.2 Contribution to CCAFS Outcomes

RP EA - Outcome 2019: National Institutions, Donors and Relief Agencies are accessing and using research informed forecasting tools for timely and efficient food security decision-making and Academic, Government (e.g. Ministry of Ag.), and Development Organizations are developing and testing climate applications for agriculture to support scaling out and adoption of climate services to users (Farmer Organizations, CBOs, NGOs, agro-dealers, community radio).

Indicator #1: FP2 Indicator: Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities

2019	
Target value: 3	Cumulative target to date: 4
<p>Target narrative: Two national Disaster Risk Management and Food Security (DRMFS) offices in the project countries support national and sub-national agricultural production and food security decisions and climate-informed safety nets that most benefit vulnerable households and communities in the respective countries. The regional World Food Program (WFP) in east Africa uses research-informed forecasting tool for timely and efficient food security decision-making that improves its response timeliness and efficiency to climate shocks in the region; which help save lives and reduce depletion of assets of vulnerable households. This will be achieved by involving both national and regional/international stakeholders in the planning and implementation stages of the project through strong monitoring and evaluation</p>	

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2019
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>

2015		
Target value: 0	Cumulative target to date: 0	Target achieved: 1.0
Target narrative: The activities in the first year of the project are designed to establish good communication and interaction among project implementers and next users. The major project outputs in 2015 include identification of strengths and weaknesses of existing early warning tools, early warning communication mechanisms and decisions at national and regional levels; calibration and evaluation of food production forecast models, and food security determinants in the region.		
Narrative for your achieved targets, including evidence: Under the INAPFS project, ICPAC has been able to generate both seasonal and monthly quantitative forecast outputs and effectively communicate them to stakeholders (e.g., national meteorological and hydrological services, national disaster management and food security offices) in the IGAD region. The new forecasts give a spatial distribution of rainfall amounts across east Africa and this has contributed to the usefulness of climate information and early warning in the region. The 41st Greater Horn of Africa Climate Outlook Forum (GHACOF41) for the SOND 2015 season included quantitative rainfall forecasts.		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: There are no specific gender and social inclusion outcomes.		

2016	
Target value: 1	Cumulative target to date: 1
Target narrative: The IGAD Climate Predication and Application Center (ICPAC) supports three national meteorological service agencies in the project countries to provide credible ago-advisories. This will be achieved by (i) improving the skill of seasonal climate forecasts including capacity at ICPAC, and (ii) working with the national meteorological services.	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: Women and disadvantage groups will indirectly benefit from improved ago-weather advisories.	

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		
Narrative for your achieved targets, including evidence: <Not defined>		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		

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2014

Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways

Activity 2014-126: This activity contributes to FP12019 Outcome #1 and FP42019 Outcome #1.

Activity 2014-235: This activity contributes to the FP12019 Outcome #1.

Activity 2014-247: The activity contributes to FP12019 Outcome #1.

Activity 2014-255: Food Security tools will serve as decision support tools and hence contribute to prioritization and implementation of equitable CSA practices (2025 Indicator #1).

Activity 2014-271: The food security forecasting tools could also be used to prioritize CSA practices in the different areas of the study region and hence contribute to the first outcome in FP-1 (FP12019 Outcome #1).

Activity 2014-272: N/A

Collaborating with other CRPs

Maize

Description of collaboration: We are collaborating with MAIZE CRP on maize modeling in Sub-Saharan Africa, particularly on generation of data from a network of field experiments in Eastern and Southern Africa for model calibration. We also collaborated with the PIM CRP on capacity building of national partners on climate risk management.

The achieved outcome contributions: <Not defined>

4.4 Outcome case studies

Outcome case study #1
<p>Title: ICPAC provides high resolution quantified seasonal forecast to the East Africa region</p>
<p>Outcome statement: The IGAD Climate Prediction and Application Center (ICPAC) used to provide only categorical seasonal climate forecasts (Above Normal, Near Normal and Below Normal) in the past which did not give specific amounts and hence difficult to interpret by the end users. Under the INFAPFS project, ICPAC has been able to generate both seasonal and monthly quantitative forecast outputs, effectively communicate them to the users in the IGAD region and thereby improved the usefulness of climate information in the region.</p>
<p>Research Outputs: Improved seasonal forecasts with quantitative rainfall amounts, downscaled monthly forecasts and dissemination of downscaled forecasts to national and regional stakeholders.</p>
<p>Research Partners: Institut Geographique du Burundi; Meteorologie Nationale de - 4 - Djibouti; Eritrea Meteorological Services; National Meteorological Agency of Ethiopia; Kenya Meteorological Service; Rwanda Meteorological Agency; South Sudan Meteorological Services; Somalia Meteorological Service; Sudan Meteorological Authority; Tanzania Meteorological Agency and Uganda National Meteorological Authority provide station data and participate in developing the ICPAC's consensus regional forecasts. The International Maize and Wheat Improvement Center (CIMMYT), the International Crops Research Institute in the Semi-Arid Tropics (ICRISAT), Partnership for Economic Policy (PEP), World Food Program (WFP) and Famine Early Warning Systems Network (FEWS NET) are involved in progress review and monitoring meetings.</p>
<p>Activities that contributed to the outcome: The activities that contributed to this outcome include the following:</p> <ul style="list-style-type: none"> • identification of the best weather forecast downscaling tools for the Eastern Africa region, • assembling the required historical data, and production of gridded climatological data set with high spatial and temporal resolution, • developing tools for data preparation, scripting and making of statistical downscaling using CPT tool, • improvement of ICPAC weather forecasts through verification of previous seasonal outlooks, identification of gaps for further improvement & production of high resolution 10-day forecasts, • downscaling of seasonal 2015 forecasts to monthly scales, • identification of early warning triggers and indicators, and initial forecast downscaling for agricultural applications, and • dissemination of downscaled forecasts and agro-advisories (GHACOF41)
<p>Non-research Partners: The CGIAR program on Climate Change, Agriculture and Food Security (CCAFS) Institutional Support to African Climate Institutions Project (ISACIP) - which supports the GHACOF process</p>
<p>Output Users: The major users of the outputs are policy makers, national meteorological and hydrological services, national disaster management and food security offices, regional and international Non-Governmental organizations (IGAD, AfDB, UNISDR, WFP, UNDP, FAO, UNOCHA) and agriculturalists.</p>
<p>How the output was used: The national climate services downscale ICPAC's forecasts to give local level weather advisories, DMRFSS and relief agencies use the outputs for national early warning and preparedness planning, and the regional Agriculture and Food Security Working Group use the forecasts to issue quarterly agriculture and food security status briefs and alerts.</p>
<p>Evidence of the outcome: GHACOF 41 SOND 2015 Forecast Presentation (pdf); http://www.fao.org/disasterriskreduction/east-central-africa/fsnwg/documents/detail/en/c/4345/ http://rcc.icpac.net/modules/board/files/Downscaled%20GHACOF%2041%20Bulletin.pdf</p>

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

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

FP2 Indicator: Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities

Explanation of the link between your outcome story and the CCAFS indicators: As indicated above this progress towards outcome contributes to CCAFS outcome on the number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities.

Year: 2015

Annexes uploaded: [FSNWG September Update 24_09_2015.pdf](#)

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5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
<p>FP2 - MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP2 - MOG # 1: New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
Major Output groups - 2014
<p>FP2 - MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs</p> <p>Brief bullet points of your expected annual 2014 contribution towards the selected MOG <Not defined></p> <p>Brief summary of your actual 2014 contribution towards the selected MOG: The DSSAT model for maize and sorghum has been calibrated using data collected from previous experiments, and agricultural sample surveys. The models have been tested to simulate yields of maize and sorghum at national level in Ethiopia and Kenya using gridded climate and soil data at high resolution.</p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p> <p>Summary of the gender and social inclusion dimension of the 2014 outputs: <Not defined></p>

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FP2 - MOG # 1: New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries

Brief bullet points of your expected annual 2014 contribution towards the selected MOG

<Not defined>

Brief summary of your actual 2014 contribution towards the selected MOG:

<Not defined>

Brief 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>

Major Output groups - 2015

FP2 - MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

The DSSAT model has been calibrated using data collected from previous experiments, and agricultural sample surveys. The models have been tested to simulate yields of maize and sorghum at national level in Ethiopia and Kenya using gridded climate and soil data at high resolution.

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

<Not defined>

Summary of the gender and social inclusion dimension of the 2015 outputs:

This component has no gender and social inclusion dimension.

FP2 - MOG # 1: New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

ICPAC evaluated several climate forecasting and down-scaling tools and selected tools that improved the skill of seasonal forecasts and allow for further processing of the forecasts. Accordingly, ICPAC has been able to convert probabilistic rainfall forecasts into rainfall amounts which are useful for national climate service providers.

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

<Not defined>

Summary of the gender and social inclusion dimension of the 2015 outputs:

This component has no gender and social inclusion dimension.

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Major Output groups - 2016

FP2 - MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs

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

Spatial crop modeling tool for production forecasting tested and validated in Ethiopia and Kenya

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

Focus is on biophysical models and hence the gender dimension is limited.

FP2 - MOG # 1: New climate information and analysis that enhances the capacity of data providers (e.g. regional and national meteorological institutions) to meet the demands of climate service beneficiaries

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

Publication on comparison of climate prediction tools for EA region

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

Purely biophysical work and has no gender component.

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: A successful accomplishment of the 2015 activities led to achieving the planned outputs that contribute to the identified MOGs. The major lesson is that commitment of the project partners is a major factors in achieving the project outputs. Partner commitment will continue in 2016 so long as the project secures enough funding.

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5.2 Deliverables

Deliverable #1

Main Information	
Title: Report on the strengths and weaknesses of existing early warning systems	
MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: Data and information have been collected from focus group discussions with regional climate forecast providers (ICPAC, FEWSNET), relief agencies (WFP, UNOCHA), national meteorological service agencies (Kenya, Ethiopia, Tanzania, and Burundi) and literature review to map early warning systems in EA and to identify the strengths and weaknesses of existing food security assessment methods, tools and early warning information flow and use in East Africa. Analysis is completed and the first draft report is being edited by authors.

Next-user
Activities #2, 3 & 4, and FEWS NET, ICPAC, WFP and national partners
Knowledge, attitude, skills and practice changes expected in next-user: The strengths and weaknesses of existing food security assessment methods and tools known, and further improvements identified. Mechanism of early warning information flow and use mapped at regional, national and sub-national levels.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The major findings of the report will be communicated to project team members, and regional and national partners through a stakeholder workshops. Open access publication and presentation in regional/international conferences.

Partners contributing to this deliverable
Partner #1 (Responsible): Gbegbelegbe, Sika <g.sika@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Vhurumuku, Elliot <elliot.vhurumuku@wfp.org>, WFP - World Food Programme
Partner #3: Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

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Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Restricted Use Agreement - Restricted access
Restricted access until:
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: Climate and Food Security Forecast and Early Warning Systems in Eastern Africa
Creator / Authors: Moti Jaleta
Author Identifier: <Not defined>
Publication / Creation date: 2016
Language: English
Coverage: East Africa

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #2

Main Information	
Title: Methods for improving seasonal climate forecasts in the EA region	
MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Databases

Submitted on 2016-03-02 at 13:29 UTC

Year of expected completion: 2015**Status:** Complete**Next-user**

Activity # 3 & 4, and national meteorology services in the project countries (Ethiopia, Kenya, Tanzania, Uganda, Rwanda and Burundi)

Knowledge, attitude, skills and practice changes expected in next-user: Confidence in the use of climate forecasts for agricultural production forecasting and for agro-advisories in the EA region because of improved skill and resolution of seasonal climate forecasts.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Improved seasonal climate forecasts will be made available on an open access online repository. The outputs will be integrated into the Greater Horn of Africa Climate Forum (GHACOF) that formulates a regional climate outlook for the region.

Partners contributing to this deliverable

Partner #1 (Responsible): KK Atheru, Zachary <zatheru@icpac.net>, ICPAC - IGAD Climate Prediction and Applications Centre

Deliverable Ranking

Address gender and social inclusion aspect	1
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	3
What is your personal perspective of the importance of this product	4

Deliverable dissemination

Open access restriction: Restricted Use Agreement - Restricted access

Restricted access until:

License adopted: <Not defined>

Dissemination Channel: other

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Submitted on 2016-03-02 at 13:29 UTC

Description: Historical station data from 102 stations across the 11 ICPAC member states and satellite Rainfall Estimates (RFEs) data from the Climate Hazards Group (CHG) covering the period 1981-2014 were assembled. The station data have been blended with the satellite RFEs to produce a better representative dataset at monthly and 10 day time scales at 5 km resolution covering the Greater Horn of Africa.

The 2015 activity focused on achieving a seasonal climate forecast with improved skill and spatial resolution for the EA region by ICPAC. The activities that have been conducted in 2015 include identification of the best weather forecast downscaling tools for the Eastern Africa region, assembling the required historical data, and production of gridded climatological dataset with high spatial and temporal resolution, developing tools for data preparation, scripting and operationalization of statistical downscaling using CPT tool, improvement of ICPAC weather forecasts through verification of previous seasonal outlooks, identification of gaps for further improvement & production of high resolution 10-day forecasts, downscaling of seasonal 2015 forecasts to monthly scales, identification of early warning triggers and indicators, and initial forecast downscaling for agricultural applications, and dissemination of downscaled forecasts and agro-advisories (GHACOF41). The major achievements were incorporation of quantified rainfall amounts in the ICPACs seasonal climate forecasts, evaluation of the skill of past seasonal climate forecast and developing scripts and tools that improve climate forecast skills.

Creator / Authors: ICPAC

Author Identifier: <Not defined>

Publication / Creation date: December 2015

Language: English

Coverage: East Africa

Deliverable Data sharing

Deliverable files

<Not defined>

Deliverable #3

Main Information

Title: Gridded seasonal climate forecast data for crop model input for Ethiopia, Kenya and Tanzania

MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs

Main Type: Data and information outputs, including datasets, databases and models

Sub Type: Data

Year of expected completion: 2016

Status: On-going

Justification for cancelling the deliverable: This deliverable is planned for 2016.

Next-user

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Activities #3& 4 of this project, FEWS NET, and bilateral partner projects (e.g. AgMIP, GYGA).

Knowledge, attitude, skills and practice changes expected in next-user: Crop modellers use reliable and high resolution seasonal climate forecast data for crop production forecasting.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available through online repository to be hosted by ICPAC.

Partners contributing to this deliverable

Partner #1 (Responsible): KK Atheru, Zachary <zatheru@icpac.net>, ICPAC - IGAD Climate Prediction and Applications Centre

Deliverable Ranking

Address gender and social inclusion aspect	1
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination

Open access restriction: Yes

License adopted: <Not defined>

Dissemination Channel: -1

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Deliverable Data sharing

Deliverable files

<Not defined>

Submitted on 2016-03-02 at 13:29 UTC

Deliverable #4

Main Information	
Title: Data for calibration and evaluation of agricultural production forecasting models in Ethiopia and Kenya	
MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2015	
Status: Complete	

Next-user
Activities # 4 & 5, bilateral projects (e.g., AgMIP, GYGA, TAMASA)
Knowledge, attitude, skills and practice changes expected in next-user: Improved skill and confidence in the calibration and evaluation of production forecasting tools
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Involving stakeholders in the planning and execution phases, training workshops, sharing of data through online repositories.

Partners contributing to this deliverable
Partner #1 (Responsible): Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Claessens, Lieven <l.claessens@cgiar.org>, ICRISAT - International Crops Research Institute for the Semi-Arid Tropics

Deliverable Ranking	
Address gender and social inclusion aspect	1
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Restricted Use Agreement - Restricted access
Restricted access until:

Submitted on 2016-03-02 at 13:29 UTC

License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: Site level and gridded climate, soil, crop and crop management datasets collected from different sources. The data are prepared in a format that is compatible to the DSSAT suits of models.
Creator / Authors: K. Tesfaye and L.Claessens
Author Identifier: <Not defined>
Publication / Creation date: 2016
Language: English
Coverage: Ethiopia and Kenya

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #5

Main Information
Title: Production forecasts for major food security crops in Ethiopia and Kenya
MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs
Main Type: Data and information outputs, including datasets, databases and models
Sub Type: Data
Year of expected completion: 2016
Status: On-going
Justification for cancelling the deliverable: Activity will start in 2016

Next-user
Activities # 4 & 5 and national disaster management and food security offices in the three countries
Knowledge, attitude, skills and practice changes expected in next-user: Improved skill and increased confidence in the use of agricultural production forecasting tools for early warning systems

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Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Collaborative planning and execution of activities, training workshops, and sharing of data and production forecast through online repositories.

Partners contributing to this deliverable

Partner #1 (Responsible): Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	1
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Deliverable dissemination

Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Deliverable #6

Submitted on 2016-03-02 at 13:29 UTC

Main Information	
Title: Workshop report on engagement of national and regional partners	
MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs	
Main Type: Workshops	Sub Type: Workshop
Year of expected completion: 2015	
Status: Complete	

Next-user
National disaster management and food security offices and meteorological service agencies, FEWS NET, ICPAC, WFP, FAO and ASARECA
Knowledge, attitude, skills and practice changes expected in next-user: Understanding the project objectives, expectations and engagement requirements
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Project inception workshop

Partners contributing to this deliverable
Partner #1 (Responsible): Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Vhurumuku, Elliot <elliot.vhurumuku@wfp.org>, WFP - World Food Programme
Partner #3: Shiferaw, Bekele <b.shiferaw@pep-net.org>, PEP - Partnership for Economic Policy
Partner #4: KK Atheru, Zachary <zatheru@icpac.net>, ICPAC - IGAD Climate Prediction and Applications Centre
Partner #5: Claessens, Lieven <l.claessens@cgiar.org>, ICRISAT - International Crops Research Institute for the Semi-Arid Tropics

Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	4
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>

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Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: Workshop proceeding that summarize all presentations and discussions.
Creator / Authors: F. Getanheh and K. Tesfaye
Author Identifier: <Not defined>
Publication / Creation date: June 2015
Language: English
Coverage: East Africa

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #7

Main Information
Title: Journal article on strengths and limitations of existing early warning sustems and use in EA
MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs
Main Type: Peer reviewed Publications
Sub Type: Peer-reviewed journal articles
Year of expected completion: 2016
Status: On-going
Justification for cancelling the deliverable: This deliverable is planned for 2016 and will be accomplished as planned.

Next-user
The public in the region and the international community
Knowledge, attitude, skills and practice changes expected in next-user: Strengths and limitations of existing food security assessment methods and tools known and communicated.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Open access publication and presentation at international conferences.

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Partners contributing to this deliverable
Partner #1 (Responsible): Gbegbelegbe, Sika <g.sika@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #3: Vhurumuku, Elliot <elliot.vhurumuku@wfp.org>, WFP - World Food Programme
Partner #4: Claessens, Lieven <l.claessens@cgiar.org>, ICRISAT - International Crops Research Institute for the Semi-Arid Tropics

Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

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Deliverable #8

Main Information	
Title: Updated SAM + integration of major staples into CGE modeling framework + defining relevant scenarios/shocks	
MOG # 4: Decision support systems improved or developed for incorporation into national food security safety net programs	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Databases
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: In 2015, the social accounting matrix (SAM) has been updated for Kenya and Ethiopia and major cereals have been integrated into the CGE model. The SAM updated for Kenya has three agroecological zones with 143 production activities and 53 commodities. The SAM updated for Ethiopia has 5 agroecological zones, 47 activities and 69 commodities. The data collected in 2015 will be used as inputs for the 2016 activities of the project.

Next-user
Activity #4
Knowledge, attitude, skills and practice changes expected in next-user: Well defined scenarios/shocks
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Internal project data portal and team meetings

Partners contributing to this deliverable
Partner #1 (Responsible): Shiferaw, Bekele <b.shiferaw@pep-net.org>, PEP - Partnership for Economic Policy

Deliverable Ranking	
Address gender and social inclusion aspect	3
Potential for/ actual contribution to outcomes	3
Level of shared ownership (partnerships across org.)	2
What is your personal perspective of the importance of this product	4

Deliverable dissemination
Open access restriction: Restricted Use Agreement - Restricted access

Submitted on 2016-03-02 at 13:29 UTC

Restricted access until:
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: Social accounting matrix (SAM) data updated for Kenya and Ethiopia for use in the CGE model. The data collected in 2015 will be used as inputs for the 2016 activities of the project.
Creator / Authors: Partnership for Economic Policy
Author Identifier: <Not defined>
Publication / Creation date: 2016
Language: English
Coverage: Ethiopia and Kenya

Deliverable Data sharing
Deliverable files <Not defined>

5.3 Summary on next-users

Next user #1
<p>Key next user for the current reporting period. Key game changers. Observed Knowledge, Attitude, Skills and practice changes: For most of the deliverables in 2015, the next users were project partners (e.g., ICPAC, FEWS NET) and project team members who are going to use the 2015 deliverables as an input to the 2016 activities and deliverables. Most of the next users are not only project implementers but also users of the project outputs. For some of the deliverables, our next users were the national meteorological and hydrological services in the project countries who provide climate services in their respective countries. These next users are key because they are the ones who communicate the seasonal climate forecasts that are developed in collaboration with ICPAC to the end users in the project countries. The national meteorological and hydrological service agencies in the project countries have shown strong interest to collaborate with the INAPFS project, to provide station weather data to the project through ICPAC, and to evaluate and use new climate forecasting tools that come out of the project.</p>
<p>Strategies (facilitation, engagement, knowledge sharing etc.) you used to encourage and enable this next user to utilize deliverables and adopt changes: Team meetings, Skype discussions, and progress reviews sessions helped to bring the project team and partners close and up-to-date. These events encouraged joint planning and shared responsibilities. Moreover, inception workshop, and presentation of the INAPFS project at regional forums such as the Greater Horn of Africa Climate Outlook Forum (GHACOF) and the NASA Regional Workshop on forecasting of hydro meteorological events in east Africa helped to create awareness and open discussion with national and regional stakeholders.</p>
<p>Reported deliverables serve as evidence towards this achieved change: For example, the climate forecasting tools evaluated and selected by ICPAC were used in the 2015 SOND regional seasonal climate forecast. For the first time, the SOND forecast included rainfall amounts in addition to the usual probabilistic above normal, near normal and below normal forecasts. These forecasts were well received by the national climate service providers and presented at the 41st Greater Horn of Africa Climate Outlook Forum (GHACOF41) as consensus regional climate forecasts.</p>
<p>Lessons and implications for the next planning cycle: In a projects that involves several partners and stakeholders, engaging partners and the next users is a daunting task. It requires additional efforts and commitment to make it work. In 2016, we will speed up our effort to engage our next users through individual discussion forums and capacity building workshops so long as resources are available for such efforts.</p>

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5.4 Project highlights

6. Activities

Activity #1	
Title: Review of existing early warning systems and information flow and use in EA	
<p>Description: There are several ex ante and ex post food security assessment methods and tools which are used by different institutions for different purposes. Each method or tool has its own strengths and limitations, and understanding this will give insights into the improvements needed to develop a robust food security forecasting system. Moreover, understanding the flow of early warning information and decision making across the early warning chain helps identify major actors and limitations and opportunities of early warning information use at national and sub-national levels. This activity will include a detailed review and evaluation of existing food security assessment methods and tools currently used by different institutions including those by FAO, WFP, FEWSNET, IGAD, national disaster risk management offices, etc. through literature review, focus group discussion with experts and technicians working on food security assessments and early warning systems and users of food security assessments outputs.</p>	
Start date (dd-MM-yyyy): 15-01-2015	End date (dd-MM-yyyy): 31-12-2016
Leader: Gbegbelegbe, Sika <g.sika@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	<p>Justification: Data and information have been collected from focus group discussions with regional climate forecast providers (ICPAC, FEWSNET), relief agencies (WFP, UNOCHA), national meteorological service agencies (Kenya, Ethiopia, Tanzania, and Burundi) and literature review to map early warning systems in EA and to identify the strengths and weaknesses of existing food security assessment methods, tools and early warning information flow and use in East Africa. Analysis is completed and the first draft report is being edited by authors.</p>
Activity #2	
Title: Develop robust seasonal climate forecasting system with high spatial and temporal resolution for the region	
<p>Description: Climate is a major determinant of agriculture in the Eastern Africa Region and it is a major source of production variability and food insecurity in the region. Data from seasonal climate forecasts with improved skill and high spatial resolution are required by early warning systems that provide anticipated production and livelihood changes in a season. Based on existing experience and advances in climate forecasting and down scaling knowledge and tools, partners involved in this activity will focus on improving the skill of seasonal climate forecasts and provide climate data (rainfall, maximum and minimum temperature and solar radiation) at high resolution (<10 km) that are going to be used with crop models for crop yield and production forecasting. ICPAC in collaboration with its partners will provide historical and seasonal climate forecast data at the same spatial resolution and in a format that can be used by crop models.</p>	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-05-2018

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Leader: KK Atheru, Zachary <zatheru@icpac.net>, ICPAC - IGAD Climate Prediction and Applications Centre	
Status: On-going	Justification: The activities that were conducted in 2015 include identification of the best weather forecast downscaling tools for the Eastern Africa region, assembling the required historical data, and production of gridded climatological dataset with high spatial and temporal resolution, developing tools for data preparation, scripting and making statistical downscaling using CPT tool, improvement of ICPAC weather forecasts through verification of previous seasonal outlooks, identification of gaps for further improvement & production of high resolution 10-day forecasts, downscaling of seasonal 2015 forecasts to monthly scales, identification of early warning triggers and indicators, and initial forecast downscaling for agricultural applications, and dissemination of downscaled forecasts and agro-advisories (GHACOF41). The major achievements were incorporation of quantified rainfall amounts in the ICPACs seasonal climate forecasts, evaluating the skill of past seasonal climate forecast and developing scripts and tools that improve climate forecast skills.

Activity #3

Title: Provide seasonal crop production forecasts for major food security crops	
Description: Crop production in the EA region is increasingly threatened by recurrent droughts and/or flash floods under climate change. Cereals comprise 76% and grain legumes 24% of the 20 million hectares of land that is allocated to annual crops in the region. Among cereals, maize comprises 7.6 million hectares (50%) of the annual cereal area followed by sorghum (20%) and wheat (11%). The CRAFT tool will be used for making the production forecasts. Therefore, the major objectives of this activity will be to collect data that are necessary to calibrate and evaluate the DSSAT crop models that is used in the CRAFT tool and the production forecasts. These include (1) crop area map for the major food security crops (maize, sorghum and common bean), (2) widely grown varieties of each crop, (3) soil profile information, and (4) crop management practices in Ethiopia and Kenya.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 30-09-2018
Leader: Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	

Submitted on 2016-03-02 at 13:29 UTC

Status: On-going

Justification: The major focus of the 2015 activity was to calibrate agricultural production forecasting tools for major food security crops in Ethiopia and Kenya. The major sub-activities accomplished in 2015 include creation of crop area map (mask) for the major food security crops (maize, sorghum and common bean), identification of widely grown varieties of maize and sorghum in Ethiopia and Kenya, preparation of spatial soil profile information for input to crop models across the major soil types in the study countries, and dominant crop management practices for the respective crops. Soil data was obtained from the recent 1 km x 1km resolution AfSIS soil database for all model input parameters. In order to use consist data across countries for model calibration, gridded (25 km x 25 km) daily climate data (1980-2010) was obtained from the Modern Era Retrospective-Analysis for Research and Applications (MERRA), which is bias corrected locally using weather stations data and re-sampled to 1 km x 1 km resolution to match the soil data. Crop and crop management data were collected from experimental fields in collaboration with CRP MAIZE for maize, and for from previous field experiments in Ethiopia for sorghum. The CERES-Maize model in DSSAT was then calibrated using representative maturity groups (extra early, early, medium and late) at site level for each crop. For spatial simulation, maturity groups were assigned to FAO growing period ecological zones so that the varieties are assigned to the appropriate ecological zones based on their length of growing period (maturity). For spatial simulation, R-script was developed to run DSSAT in parallel (pDSSAT) at 1 km x 1 km pixel combining soil, weather, genetic and crop management input data. The simulated yields will be compared with the county level yields obtained from statistical sample surveys in Ethiopia and Kenya.

In general, good quality input data that are required for spatial simulation have been collected, and R scripts are developed to run parallel DSSAT on a PC. The DSSAT model is calibrated at site level and model evaluations are underway at county level. The calibrated and evaluated model will be used in the CRAFT tool to link the model with climate forecasts in 2016.

Title: Food security forecasting at sub-national, national and regional levels

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Description: Climate related shocks usually result in reduction of production and cause high market prices of important food products which reduce access to those food stuff. Disruption of food prices, trade and food transport and distribution systems due to climate related shocks are major reasons for inadequate food access. The major objective of this activity is to understand determinants of food security during climate shocks, and develop a food security forecasting tool. The major activities include collection of data on determinants of food security such as price at national and sub-national levels, establish relationship between food security and climate shocks, and developing a food security forecasting tool and validate the tool using historical food security records.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-01-2018
Leader: Shiferaw, Bekele <b.shiferaw@pep-net.org>, PEP - Partnership for Economic Policy	
Status: On-going	Justification: In 2015, the social accounting matrix (SAM) has been updated for Kenya and Ethiopia and major cereals have been integrated into the CGE model. The SAM updated for Kenya has three agroecological zones with 143 production activities and 53 commodities. The SAM updated for Ethiopia has 5 agroecological zones, 47 activities and 69 commodities. The data collected in 2015 will be used as inputs to the 2016 activities of the project.

Activity #5

Title: Developing an integrated food security forecasting tool	
Description: Developing a robust integrated food security forecasting tool is the ultimate goal of this project. Activity #5 will bring together the outputs of activities 1-4 and will lead to the development of an integrated food security forecasting tool. The food production forecasting module (CRAFT) will be linked with food the security forecasting module (activity # 4) to come up with an integrated food security forecasting tool. This activity, therefore, aims to integrate the CRAFT and the food security model and resources allocated for this activity will be used to achieve this. For this, working collaborations will be established with the CRAFT tool developers/maintainers. This activity also include developing web-based tools that easily display the outputs of the integrated forecasting tool for a wider audience.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-01-2018
Leader: Girvetz, Evan <e.girvetz@cgiar.org>, CIAT - Centro Internacional de Agricultura Tropical	
Status: On-going	Justification: This activity is planned to start in 2016.

Activity #6

Title: Capacity development, monitoring and evaluation and project management	
Description: This activity focuses on engaging, communicating and building capacity of national partners through training and workshops, project monitoring and evaluation to regularly look into the use of project outputs across the impact pathway, and project management.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-01-2018
Leader: Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	

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Status: On-going

Justification: The focus in 2015 under this activity was to engage national and regional partners and to build some capacity. First, an inception workshop was conducted to create awareness about the project, its intended outputs and outcomes. The inception workshop brought together national partners (meteorological and hydro-meteorological agencies, disaster risk management and food security office) from the project countries, regional climate and early warning institutions, NGOs, relief agencies and researches.

The other activity was to create awareness about the INAPFS project to different stakeholders at national and regional level. Accordingly, INAPFS was presented at the 41st Greater Horn of Africa Climate Outlook Forum (GHACOF41) in August 2015 in Dar Es Salam, Tanzania where more than 300 participants from policy, early warning, climate, agriculture, food security, and relief sectors. The feedback from the participants was positive and encouraging and other countries which are not part of the project (Somalia, Djibouti and South Sudan) requested to be part of the project. The INAPFS project was also presented to national meteorological and hydrological agencies for all countries in East Africa, and participants from universities and research centers and early warning sectors at the “Seasonal Prediction of Hydro-climatic Extremes in the Greater Horn of Africa” workshop organized by NASA and the University of Nebraska, Lincoln from July 28-29, 2015 in Addis Ababa, Ethiopia. Regular progress review meetings among the project partners were also conducted in the form of Skype discussions and face-to-face meetings.

These activities helped creating greater awareness about the INAPFS project and the need for improving the existing early warning systems in the region. This also makes it easy for creating interest and collaboration with the national and regional stakeholders which will have a strong role on the use of the project outputs at a later stage. Moreover, a good acceptance of the project by national partners encouraged the project partner institutions to work together and inspired them to achieve the stated project outcomes despite budget cuts and limited availability of resources.

In terms of capacity building, ICPAC has provided hands-on training to four participants from Uganda National Meteorological Agency (UNMA) for a week on generation of short to medium-term weather forecasts using climate models. In

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	<p>collaboration with the PIM CRP, CIMMYT also provided training on the application of crop models in climate risk management for 15 participants drawn from seven African countries from 7-11 December 2015 In Addis Ababa, Ethiopia.</p> <p>So long as funding is available for the project, the good lessons from 2015 will continue in 2016.</p>
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Activity #7	
<p>Title: (BILATERAL) Integrated Agricultural Production and Food Security Forecasting System for East Africa</p>	
<p>Description: The major bilateral projects that contribute to this project are: Agricultural Models Inter-comparison Project (AgMIP), Global Yield Gap Atlas (GYGA), Drought Tolerance Maize for Africa (DTMA), Sustainable Intensification of Maize-Legume cropping Systems for food Security in Eastern and Southern Africa (SIMLESA)</p> <p>ICPAC, PEP and WFP will contribute through mobilizing leverage funds.</p>	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-01-2018
<p>Leader: Tesfaye Fantaye, Kindie <k.tesfayefantaye@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center</p>	
Status: On-going	<p>Justification: The INAPFS project has benefited from AgMIP, GYGA, DTMA and SIMLESA projects particularly in accessing data collected through the projects, collecting new data and sharing knowledge and tools.</p>

Lessons regarding your project activities and possible implications for the coming planning cycle: Despite budget cuts and relatively late start of the project, all activities planned for 2015 were conducted and almost all deliverables were achieved. This is a result of a strong belief in the relevance of the project by the project partners and their commitment to it. Such commitment is also expected to continue in 2016.

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7. Leverages

Leverage #1	
Title: Intercomparison of agricultural models (sorghum)-ICRISAT	
Partner name: AgMIP - Agricultural Model Intercomparison and Improvement Project - United States	
Year: 2015	
Flagship: FP2: Climate Information Services and Climate-Informed Safety Nets	Budget: US \$20,000.00

Leverage #2	
Title: Strengthening the Capacity of IGAD in Building Disaster Resilience in the Horn of Africa	
Partner name: ICPAC - IGAD Climate Prediction and Applications Centre - Kenya	
Year: 2015	
Flagship: FP2: Climate Information Services and Climate-Informed Safety Nets	Budget: US \$28,000.00

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Title: Develop Index insurance for drought-prone maize and bean-based farming systems in East Africa to enhance farmer adoption of climate-adapted germplasm

Start date (dd-MM-yyyy)	01-01-2015	End date (dd-MM-yyyy)	31-12-2018
Management liaison	F2 - Flagship 2	Mgmt. liaison contact	Kinyangi, James <j.kinyangi@cgiar.org>
Lead organization	CIMMYT - International Maize and Wheat Improvement Center - Ethiopia	Project leader	Hellin, Jonathan <j.hellin@cgiar.org>
Project type	CCAFS COFUNDED	Detailed project workplan	<Not defined>

Project is working on

Flaship(s)	Region(s)
FP2: Climate Information Services and Climate-Informed Safety Nets	RP EA: East Africa

Bilateral project(s) contributing to this project
137 - Linking crop index insurance schemes to bilateral research projects that are developing and generating climate-adapted maize germplasm in Sub-Saharan Africa

Summary

Drought leads to crop yield losses and reduced food and livelihood security. Drought-tolerant germplasm is available but the risk of drought prevents farmer adoption. Insurance helps farmers manage risks and invest in inputs without worrying about crop losses and increased debt.

Index insurance is a way to reduce risk and boost the use of agricultural inputs and equipment, leading to increased and more stable crop production. Index insurance can be combined with credits for insured smallholders, as the risk of non-repayment for lenders is reduced. It makes participation in the market for agricultural insurance and credit attractive for the private sector.

Index insurance needs to be attractive and affordable to farmers, and profitable to insurers. This project will develop and test in East Africa and Nigeria a scientifically-validated design of drought insurance bundled with climate-adapted germplasm. Appropriate index insurance products will be developed with farmers, insurers, re-insurers and seed companies..

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2. Partners

Partner #1

Institution: CIAT - Centro Internacional de Agricultura Tropical

Contacts

Type	Contact	Responsibilities and contributions
Partner	Laderach, Peter <p.laderach@cgiar.org>	Because of budget cuts and center priorities, CIAT will not be involved in this project

Partner #2

Institution: IRI - International Research Institute for Climate and Society

CCAFS Partner(s) allocating budget

CIMMYT - International Maize and Wheat Improvement Center - Ethiopia

Contacts

Type	Contact	Responsibilities and contributions
Partner	Greatrex, Helen <greatrex@iri.columbia.edu>	<p>IRI will work with CIMMYT on:</p> <ol style="list-style-type: none"> 1) Bringing together key actors to explore the feasibility of developing indices for maize-based farming systems in East Africa and Nigeria. 2) Developing a proposal for future work on crop index insurance. This is likely to be a Meso-America focused proposal for external funding that builds on current IRI work on crop index insurance in Honduras. 3) Writing three journal articles and a document that captures lessons learnt from existing crop index insurance targeted at resource-poor farmers. One article will focus on index insurance and social equity <p>Activity 2014-137 *Partner*. Activity 2014-274 *Partner*.</p>

Partner #3 (Leader)

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Institution: CIMMYT - International Maize and Wheat Improvement Center**Contacts**

Type	Contact	Responsibilities and contributions
Project Leader	Hellin, Jonathan <j.hellin@cgiar.org>	Activity 2014-137 *Leader*. Activity 2014-270 *Leader*. Activity 2014-273 *Leader*. Activity 2014-274 *Leader*.

Partner #4**Institution:** Columbia University**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Greatrex, Helen <greatrex@iri.columbia.edu>	See above

Partnerships overall performance over the last reporting period: Partnership with IRI has been excellent in terms of joint planning and implementation of two workshops on index insurance (one in London and the other in Zurich). Also a joint presentation at the Global Science Conference in Montpellier March 16-18, 2015. Also there is a very strong emerging partnership with Rose Goslinga of Pula Advisers. Rose is the former CEO of ACRE (formerly Kilimo Salama) and she is actively participating in the index insurance initiative with the Nigerian Government.

Lessons regarding your partnerships and possible implications for the coming reporting cycle: 2016 promises to be an opportunity to strengthen the partnerships with IRI and Rose Goslinga in Nigeria, East Africa (and possibly in Central America)

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3. Locations

Project level	Latitude	Longitude	Name
Region	Not applicable	Not applicable	East Africa
Region	Not applicable	Not applicable	West Africa
Country	Not applicable	Not applicable	Kenya
Country	Not applicable	Not applicable	Nigeria

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

By 2019, the project will enable drought insurance to be delivered to an additional 700,000 farmers in East Africa and Nigeria. The insurance will be bundled with climate- adapted maize varieties and delivered to farmers through seed supply chains supported in East Africa and Nigeria by the Drought Tolerant Maize for Africa (DTMA) and the Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) Projects, In the case of Nigeria there are already plans for implementing index insurance pilots.

The project will contribute to East Africa Flagship 2 MOG "Weather related Insurance products are designed and tested for drought-prone maize and bean-based farming systems in EA" and to the Flagship 2 overall MOG "Weather related Insurance products are designed, tested, and brought to scale with implementing partners". The project will also contribute to Flagship 2 work worldwide and to the 2024 Flagship 2 targets.

Annual progress towards outcome (end of 2015): There is growing interest in the ability of crop index insurance to enhance resource-poor farmers' livelihoods by encouraging them to invest more in key inputs such as climate- adapted germplasm. In Sub-Saharan Africa, there is interest in the success of initiatives such as HARITA in Ethiopia and Kilimo Salama (now called ACRE) in Kenya. Dan Osgood (IRI, pers. comm.) has stressed the need for lessons to be learnt from these and other initiatives worldwide. A synthesis of lessons learnt from initiatives worldwide would complement recently published work: Greatrex H, Hansen JW, Garvin S, Diro R, Blakeley S, Le Guen M, Rao KN, Osgood, DE. 2015. Scaling up index insurance for smallholder farmers: Recent evidence and insights. CCAFS Report No. 14 Copenhagen: CGIAR Research Program on Climate Change, Agriculture and Food Security (CAAFS). Available online at: www.ccafs.cgiar.org

The anticipated project outcome story is the result of the ex-post impact assessment. If Kilimo Salama is as successful as claimed, in terms of a crop index insurance initiative functioning on a largely commercial basis and bundling the insurance with farmers' increased use of (maize) germplasm, then anticipated behavioral changes include increased interest by insurers and re-insurers in the development and use of crop index insurance for resource-poor farmers in the developing world. This would be manifested by these key private sector players engaging more actively in the design process of new crop index insurance schemes in years 2-4 of the project and throughout working closely with the three main organizations involved in the project, namely CIMMYT, CIAT and IRI.

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Annual progress towards project outcome in the current reporting cycle (2015): In Nigeria, the Federal Ministry of Agriculture and Rural Development (FMARD) is keen on providing insurance to 14.5 million of its smallholder farmers. The insurance would build on the existing Growth Enhancement Scheme (GES) platform for distributing subsidized inputs (fertilizers, seed) to farmers. FMARD's future plans focus on index-based insurance, in which payouts are based on an objectively measured index that is correlated with a target loss rather than the farmers' actual loss. FMARD approached CCAFS for technical support and to facilitate the process. The example of index insurance in Nigeria was, hence, made possible by the coming together of the policy priorities of the Nigerian Government and the objectives of CCAFS.

Through South-South exchange, CCAFS facilitated an analysis and interchange of information and experiences with weather-based index insurance in India and elsewhere. A whitepaper and a workshop on designing and implementing index insurance in Nigeria was delivered; and a related panel event held in London (January 2015); with a follow-up workshop in Zurich (May 2015). Results so far include a concept note, followed by a feasibility study, for piloting weather and area-yield index insurance for maize and rice (to be bundled with appropriate seed from the International Institute for Tropical Agriculture (IITA) and Africa Rice, and using insurance expertise from Swiss Re, GIZ and CIMMYT) as well as the preparation of a 4-year roadmap for achieving the goal of nationwide farmer coverage, and a brief for the incoming Minister of Agriculture and Rural Development.

Rose Goslinga, former CEO of Kilimo Salama (now ACRE) is very involved in the pilot studies in Nigeria. This is very much the result of CCAFS inviting Rose to the aforementioned workshop in Zurich that brought together representative of FMARD, Swiss Re, GIZ, IRI and CIMMYT.

Communication and engagement activities have contributed to achieving your Project outcomes: CCAFS is leading the development of a roadmap for scaling up index insurance, and providing support to strengthen the initial implementation. CCAFS organized the workshops in London and Zurich. CCAFS has also been instrumental in connecting the index insurance plans to climate-adapted seed. CCAFS has brought in three key agricultural research organizations. Building on the Drought-Tolerant Maize for Africa project (DTMA), CIMMYT and IITA will provide technical guidance on supplying the most appropriate drought-tolerant maize varieties. Meanwhile Africa Rice will contribute through its Rice Advice site-specific management advisory tool and technical support for analysing drought risks in rice-growing environments.

Evidence documents of progress towards outcomes: [CCAFS Report to DFID_August 14_2015_Final\[1\].docx](#)

Annual progress towards outcome (end of 2016): The research project will bring together some of the key players e.g. Swiss Re, Munich Re and the project leaders of the three bilateral projects - DTMA, SIMLESA and PABRA to explore ways forward for collaborative work on crop index insurance. The results of the impact assessment of ACRE along with the experimental games with farmers, and also the developed of CIAT-led work on developing new indices will be presented and discussed at these meetings/workshops.

Annual progress towards outcome (end of 2017): The project will engage further with the international community via e.g. the World Bank to foster the expansion of crop index insurance to agricultural initiatives in regions beyond sub-Saharan Africa.

Annual progress towards outcome (end of 2018): The project will assess progress and functioning of crop index insurance in two of the three Sub-Saharan regional initiatives and revise the approach based on the evaluation.

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Lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them: <Not defined>

4.2 Contribution to CCAFS Outcomes

RP EA - Outcome 2019: National Institutions, Donors and Relief Agencies are accessing and using research informed forecasting tools for timely and efficient food security decision-making and Academic, Government (e.g. Ministry of Ag.), and Development Organizations are developing and testing climate applications for agriculture to support scaling out and adoption of climate services to users (Farmer Organizations, CBOs, NGOs, agro-dealers, community radio).

Indicator #1: FP2 Indicator: Number of regional, national, and/or sub-national initiatives incorporating research outputs to develop or improve major demand-driven, equitable, climate informed services that support rural communities

2019	
Target value: Two regional agricultural development initiatives incorporate crop index insurance mechanisms to enhance farmer uptake of drought tolerant maize and bean germplasm	Cumulative target to date: Cannot be Calculated
<p>Target narrative: Drought Tolerant Maize for Africa (DTMA) and the Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) projects are developing and promoting farmer uptake of climate adapted germplasm bundled with crop index insurance</p> <p>The research project is designed to bring together actors in capacity building for index-insurance. The coming together of actors in proposal writing, the strength of compelling journal articles etc. will contribute to a mix of public and private sector actors coming together to design and implement index insurance schemes in in regions beyond Sub-Saharan Africa.</p> <p>The expected annual gender and social inclusion contribution to this CCAFS Outcome: CIMMYT and IRI are working with a social equity expert at the University of Reading to highlight the need for index insurance schemes to address issues of social equity rather than treating beneficiaries as a homogenous group</p>	

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2015		
<p>Target value: Two regional agricultural development initiatives from amongst DTMA, SIMLESA and PABRA are exposed to the extent to which crop index insurance is a tool that can enhance farmer uptake of drought tolerant maize and bean germplasm. Plan are put in place for the research project to design crop index insurance schemes that are relevant to at least two of these three regional agricultural development initiatives.</p>	<p>Cumulative target to date: Cannot be Calculated</p>	<p>Target achieved: 80.0</p>
<p>Target narrative: Crop index insurance is not new but the concept is not easy to understand and has tended to be overlooked by agricultural research for development initiatives as they develop and promote climate-adapted germplasm. The farmer experimental games to enhance farmers' understanding of crop index insurance and their willingness to engage in crop index insurance schemes will be presented to the project leaders of the three bilateral projects along with evidence that key private players such as the re-insurers are interesting in participating in crop index insurance initiatives.</p>		
<p>Narrative for your achieved targets, including evidence: The project has facilitated the process whereby there has been a feasibility study for two index insurance pilots in Nigeria. One of these pilots is on maize and the project has linked up those designing the pilots with the Drought-Tolerant Maize for Africa project (DTMA) led by CIMMYT and IITA. The two centers are providing technical guidance on supplying the most appropriate drought-tolerant maize varieties to the pilots.</p>		
<p>The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined></p>		
<p>Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: CIMMYT and IRI are working with an equity specialist on a paper that looks at the social equity issues (including gender and social inclusion) linked to index insurance. An abstract of the paper "Cultures of Risk and Security: Farmers, Insurance Innovation and Questions of Equity" has been accepted for presentation at a conference at the British Museum in London in May 2016 on Anthropology, Weather and Climate Change.</p>		

2016	
Target value: 2	Cumulative target to date: Cannot be Calculated
Target narrative: The preliminary discussions with the two regional agricultural development initiatives will be deepened by testing the indices developed for Nigeria. This will enhance the initiative leaders’ understanding of crop index insurance and their interest in discussing further the concept with the re-insurers and engaging in the design of suitable cop index insurance schemes for their respective bilateral projects.	
The expected annual gender and social inclusion contribution to this CCAFS Outcome: CIMMYT, IRI and the University of Reading aim to publish a journal article on the importance of factoring in social inclusion when it comes to the implementation of any index insurance projects	

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		
Narrative for your achieved targets, including evidence: <Not defined>		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>		

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways

Activity 2014-273: In terms of crop index insurance being a tool to facilitate and enhance farmer uptake of climate smart agricultural technologies such as drought adapted germplasm, the research will contribute to the Impact Pathways of Flagship 1

Activity 2014-274: The proposals for future index insurance work is not confined to East Africa and will very likely include Latin America, hence, contributing to the impact pathway for Flagship 2 in Latin America.

Collaborating with other CRPs

Maize
Description of collaboration: The bilateral projects that the index insurance is working with i.e. DTMA and SIMLESA projects which part of CRP Maize. In addition Maize CRP brings some of the bilateral funding in terms of UC Davis' research with DTMA on index insurance and randomized control plots
The achieved outcome contributions: <Not defined>

Submitted on 2016-03-01 at 17:13 UTC

4.4 Outcome case studies

There is not an Outcome Case Study added.

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019

FP2 - MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners

Brief bullet points of your expected annual 2019 contribution towards the selected MOG

It is anticipated that the scaling up of index insurance in Nigeria and the involvement of some of the same actors in East Africa initiatives will mean that DTMA and SIMLESA have included index insurance in their project activities and insurance products are being designed, tested and brought to scale

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

Lessons from the CASCAID project in Ghana, along with on-going work with a social equity specialist at Reading University, means that the gender and social inclusion dimensions of index insurance are fully captured in the design and implementation of index insurance schemes in Sub-Saharan Africa

Major Output groups - 2014

FP2 - MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners

Brief bullet points of your expected annual 2014 contribution towards the selected MOG

<Not defined>

Brief summary of your actual 2014 contribution towards the selected MOG:

<Not defined>

Brief 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>

Major Output groups - 2015

Submitted on 2016-03-01 at 17:13 UTC

FP2 - MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners

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

CCAFS work with the Nigerian government has reached the point where GIZ are ready to support the implementation of index insurance pilots in Nigeria based on both a weather-based and area-yield index insurance

Brief summary of your actual 2015 contribution towards the selected MOG:

The project facilitated the design of the pilots via workshops on designing and implementing index insurance in Nigeria in London (January 2015) and Zurich (May 2015). The latter brought in Rose Goslinga, former CEO of Kilimo Salama (now ACRE). She is involved in the design and implementation of the pilots

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

Lessons from the CCAFS-supported research in Ghana on (Assessing the impact of agricultural insurance on gender dynamics In Northern Ghana) will be factored into the design of the pilots in Nigeria.

Summary of the gender and social inclusion dimension of the 2015 outputs:

To date the project has not been able to link the lessons from Ghana with the design of the pilots in Nigeria

Major Output groups - 2016

FP2 - MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners

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

CCAFS work with the Nigerian government in the implementation of the index insurance pilots in Nigeria

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

Lessons from the CCAFS-supported research in Ghana on (Assessing the impact of agricultural insurance on gender dynamics In Northern Ghana) will be factored into the implementation of the pilots in Nigeria

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: <Not defined>

Submitted on 2016-03-01 at 17:13 UTC

5.2 Deliverables

Deliverable #1

Main Information	
Title: Insurance indices design for project areas proposed, discussed and approved by partners)	
MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Year of expected completion: 2016	
Status: <Not defined>	

Next-user
Project partners, insurance and reinsurance companies involved in project e.g. those linked to the Global Index Insurance Facility (GIIF)
Knowledge, attitude, skills and practice changes expected in next-user: Agreement and buy in of next users on insurance indices design specifically the public- and private-sector actors linked to the Global Index Insurance Facility (GIIF) .
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Joint design of indices based on consultation with insurance, reinsurance, farmers coops and partners.

Partners contributing to this deliverable
Partner #1 (Responsible): Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>

Submitted on 2016-03-01 at 17:13 UTC

Dissemination URL: [<Not defined>](#)**Deliverable Metadata****Description:** <Not defined>**Creator / Authors:** <Not defined>**Author Identifier:** <Not defined>**Publication / Creation date:** <Not defined>**Language:** <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing****Deliverable files**
<Not defined>**Deliverable #2****Main Information****Title:** Paper on developed and validated insurance indices prototype**MOG # 3:** Weather related Insurance products are designed, tested, and brought to scale with implementing partners**Main Type:** Data and information outputs, including datasets, databases and models**Sub Type:** Data**Year of expected completion:** 2016**Status:** <Not defined>**Next-user**

Science community, insurers and reinsurers.

Knowledge, attitude, skills and practice changes expected in next-user: Jointly published paper on the insurance index will assure scientific rigor and validation of index by science community.**Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:** Implement agreement on design achieved in 2015 into workable insurance index.**Partners contributing to this deliverable**

Submitted on 2016-03-01 at 17:13 UTC

Partner #1 (Responsible): Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #3

Main Information
Title: Lessons learnt from index insurance projects that has enhanced farmer uptake of climate adapted germplasm
MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners

Submitted on 2016-03-01 at 17:13 UTC

Main Type: Reports, Reference Materials and Other Papers	Sub Type: Working paper
Year of expected completion: 2016	
Status: <Not defined>	

Next-user
National research organizations; government decision-makers; insurers and re-insurers
Knowledge, attitude, skills and practice changes expected in next-user: There is much interest in index insurance but evidence from 'successful initiatives' is lacking. A rigorous study highlighting what has worked will (and what has not) will add to the evidence that index insurance can be packaged in a way that makes commercial sense when targeting resource- poor farmers. .
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: IRI has already facilitated CIMMYT's links with key players in the index insurance field. Insurers and re-insurers remain interested in the getting involved in index insurance

Partners contributing to this deliverable
Partner #1 (Responsible): Greatrex, Helen <greatrex@iri.columbia.edu>, Columbia University

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>

Submitted on 2016-03-01 at 17:13 UTC

Language: <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing****Deliverable files**

<Not defined>

Deliverable #4**Main Information****Title:** Two journal articles based on lessons learnt from index insurance schemes worldwide**MOG # 3:** Weather related Insurance products are designed, tested, and brought to scale with implementing partners**Main Type:** Peer reviewed Publications**Sub Type:** Peer-reviewed journal articles**Year of expected completion:** 2017**Status:** <Not defined>**Next-user**

Kilimo Salama (ACRE) and other crop index insurance actors such as seed companies, insurers, re-insurers, governments, and donors

Knowledge, attitude, skills and practice changes expected in next-user: Rigorous peer-reviewed journal article will contribute to next users' increased interest in development outcome potential of crop index insurance**Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:** On-going dialogue with ACRE and other index insurance initiatives; Similarly, growing links between crop research organizations such as CIMMYT with next users such as insurers and re-insurers (a process facilitated by IRI) will enable the research organizations to convince the next users.**Partners contributing to this deliverable****Partner #1 (Responsible):** Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center**Deliverable Ranking****Address gender and social inclusion aspect**

<Not defined>

Potential for/ actual contribution to outcomes

<Not defined>

Level of shared ownership (partnerships across org.)

<Not defined>

Submitted on 2016-03-01 at 17:13 UTC

What is your personal perspective of the importance of this product	<Not defined>
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Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #5

Main Information		
Title: Proposal for new funding for index insurance scale out in SSA and/or Latin America		
MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners		
<table border="1"> <tr> <td>Main Type: Reports, Reference Materials and Other Papers</td> <td>Sub Type: Research report</td> </tr> </table>	Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Research report	
Year of expected completion: 2018		
Status: <Not defined>		

Next-user
Donor community (public and private) prepared to support and get involved in new crop index insurance initiatives

Submitted on 2016-03-01 at 17:13 UTC

Knowledge, attitude, skills and practice changes expected in next-user: More active engagement by key private and public sector actors in new index insurance schemes e.g. Swiss Re.

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: On-going discussions with key actors and liberal sharing of information. Brining together of key actors in project proposal workshops.

Partners contributing to this deliverable

Partner #1 (Responsible): Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata

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Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files
<Not defined>

Submitted on 2016-03-01 at 17:13 UTC

Deliverable #6

Main Information	
Title: Journal article on bringing together different actors for index insurance design and implementation	
MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners	
Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2018	
Status: <Not defined>	

Next-user
Donor community (public and private) prepared to support and get involved in new crop index insurance initiatives in Latin America
Knowledge, attitude, skills and practice changes expected in next-user: More active engagement by key private and public sector actors in new index insurance schemes e.g. Swiss Re, Mexican?, Colombian? governments partly based on compelling evidence captured in journal article
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: On-going discussions with key actors and liberal sharing of information in the build up to the article being submitted/published. Spin off strategies will include capacity building and sharing of information in for a such as conferences that the main partners in this proposal

Partners contributing to this deliverable
Partner #1 (Responsible): Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Submitted on 2016-03-01 at 17:13 UTC

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #7

Main Information
Title: Journal article highlighting advantages and disadvantages of crop index insurance for resource-poor farmers
MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners
Main Type: Peer reviewed Publications
Sub Type: Peer-reviewed journal articles
Year of expected completion: 2018
Status: <Not defined>

Next-user
Public and private sector crop index insurance actors such as seed companies, insurers, re-insurers, governments, and donors
Knowledge, attitude, skills and practice changes expected in next-user: There is much interest in the potential of index insurance to meet resource-poor farmers' needs etc. concrete evidence from 'successful initiatives' is lacking. Proposed journal article will add to the growing evidence that index insurance can be packaged in a way that makes commercial sense when targeting resource-poor farmers.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Similarly, growing links between crop research organizations such as CIMMYT & CIAT with next users such as insurers and re-insurers (a process facilitated by IRI) will enable the research organizations to demonstrate to next users where crop index insurance schemes may work and the most appropriate business models.

Submitted on 2016-03-01 at 17:13 UTC

Partners contributing to this deliverable

Partner #1 (Responsible): Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata

Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing

Deliverable files <Not defined>

Deliverable #8

Main Information

Title: Change in farmers' livelihoods and index insurance
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Submitted on 2016-03-01 at 17:13 UTC

MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners	
Main Type: Reports, Reference Materials and Other Papers	Sub Type: Discussion paper
Year of expected completion: 2018	
Status: <Not defined>	

Next-user
Bilateral projects e.g. DTMA
Knowledge, attitude, skills and practice changes expected in next-user: The bilateral projects developing and promoting climate-adapted germplasm recognize value of crop index insurance and incorporate it in their programs
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: On-going dialogue with one of the bilateral projects, joint planning of the impact assessment; joint implementation of the impact assessment etc. will contribute to the bilateral project utilizing deliverables and scaling out crop index insurance

Partners contributing to this deliverable
Partner #1 (Responsible): Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>

Submitted on 2016-03-01 at 17:13 UTC

Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #9

Main Information	
Title: Index insurance scheme tailored to DTMA and SIMLESA	
MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2017	
Status: <Not defined>	

Next-user
DTMA, SIMLESA and seed companies
Knowledge, attitude, skills and practice changes expected in next-user: DTMA is developing and DTMA and SIMLESA are promoting drought tolerant maize (and bean) varieties. Crop breeding has been successful as has capacity building of seed companies. Expected changes are recognition by next users that crop index insurance is a tool to enhance farmer adoption of the drought tolerant germplasm.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The project team led by Jon Hellin will liaise with the bilateral projects on a regular basis, inviting them to meetings with the insurers and re-insurers so as to build a community of practice around the use of crop index insurance

Partners contributing to this deliverable
Partner #1 (Responsible): Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>

Submitted on 2016-03-01 at 17:13 UTC

Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #10

Main Information	
Title: Journal paper "Index-based agricultural insurance: Addressing Questions of Equity "	
MOG # 3: Weather related Insurance products are designed, tested, and brought to scale with implementing partners	
Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2016	
Status: On-going	Justification for cancelling the deliverable: Abstract of paper has been accepted for presentation at a conference on climate change at the British Museum in London in May 2016

Submitted on 2016-03-01 at 17:13 UTC

Next-user
Different actors engaged in index insurance, particularly those designing and implementing index insurance initiatives
Knowledge, attitude, skills and practice changes expected in next-user: It is expected that the next-users will be more cognizant of the need to factor in gender and social inclusion into the design and implementation of index insurance rather than, as is the current situation, treating potential beneficiaries as a homogenous group.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The key lessons captured in the journal article will be shared through other fora

Partners contributing to this deliverable
Partner #1 (Responsible): Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Submitted on 2016-03-01 at 17:13 UTC

Deliverable Data sharing

Deliverable files

<Not defined>

5.3 Summary on next-users

Next user #1
<p>Key next user for the current reporting period. Key game changers. Observed Knowledge, Attitude, Skills and practice changes: The next user during the reporting period has been the Nigerian Federal Ministry of Agriculture and Rural Development (FMARD). FMARD approached CCAFS in 2014 to provide support for implementing index insurance schemes in Nigeria. Index insurance is more likely to scale up when there is an enabling policy environment. FMARD's interest in index insurance provides such an environment and its support for the pilots and wider scaling up makes it a game changer. At the two workshops organized by CCAFS (London, January 2015 and Zurich, May 2015), FMARD worked with CCAFS on a briefing paper for the London workshop Hellin J, Hansen J, Araba D. 2015. Evidence-Based Insurance Development for Nigeria's Farmers: Briefing paper for Nigerian Federal Ministry of Agriculture and Rural Development (FMARD)-CCAFS Knowledge-Sharing Workshop, London, 27-28 January 2015. This has been followed by a road map document which is close to being finalized.</p>
<p>Strategies (facilitation, engagement, knowledge sharing etc.) you used to encourage and enable this next user to utilize deliverables and adopt changes: Two workshops one in London and the other in Zurich in which FMARD staff actively participated. Continuous communication with adviser to the Minister of Agriculture. Co-authorship (CCAFS and FMARD) on the briefing document for London workshop, close-to-be finalized roadmap document and close-to-be finalized policy brief for new Minister of Agriculture.</p>
<p>Reported deliverables serve as evidence towards this achieved change: Hansen, J., Hellin J. and Araba, D. 2015. Building agricultural resilience in Nigeria through index insurance and scaling out of climate smart agriculture. In: Westermann O, Thornton P. and Förch W. (eds.). Reaching more farmers – innovative approaches to scaling up climate smart agriculture. CCAFS Working Paper no. 135. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), pp. 50-55.</p>
<p>Lessons and implications for the next planning cycle: Confirmation that engagement with policy makers from a very early stage can reap many benefits.</p>

Submitted on 2016-03-01 at 17:13 UTC

5.4 Project highlights

Project highlight Information #1	
Title: <Not defined>	
Author: <Not defined>	Subject: <Not defined>
Publisher: <Not defined>	Year: 2015
Project highlights types	Start date: 2016-03-01
End date: 2016-03-01	Is global: No
Country:	Keywords: <Not defined>
Highlight description: <Not defined>	
Introduction / Objectives: <Not defined>	
Results: <Not defined>	
Partners: <Not defined>	
Links / Sources for further information: <Not defined>	

Submitted on 2016-03-01 at 17:13 UTC

Project highlight Information #1	
Title: Building agricultural resilience in Nigeria through index insurance and scaling out of climate smart agriculture. In: Westermann O, Thornton P. and Förch W. (eds.). Reaching more farmers – innovative approaches to scaling up climate smart agriculture	
Author: Hansen, J., Hellin J. and Araba, D.	Subject: Climate smart agriculture
Publisher: CCAFS	Year: 2015
Project highlights types Policy engagement Capacity enhancement	Start date: 2016-03-01
End date: 2016-03-01	Is global: No
Country: Nigeria	Keywords: Index insurance, Nigeria; small-scale farmers
Highlight description: A case study on index insurance in Nigeria in a CCAFS publication. Hansen, J., Hellin J. and Araba, D. 2015. Building agricultural resilience in Nigeria through index insurance and scaling out of climate smart agriculture. In: Westermann O, Thornton P. and Förch W. (eds.). Reaching more farmers – innovative approaches to scaling up climate smart agriculture. CCAFS Working Paper no. 135. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CAAFS), pp. 50-55.	
Introduction / Objectives: Upon the request of the Nigerian Government, CCAFS organized two workshops; one in London (January 2015) and another in Zurich (May 2015). The workshops included the heads of the Nigerian and Indian Agricultural Insurance Corporations, CCAFS, SwissRe, German Development Corporation (GIZ), Nigerian Meteorological Agency (NIMET), Nigerian Agricultural Insurance Corporation (NAIC), Nigerian Insurance Association (NIA) and Pula Advisors (a consultancy company). The case study captures the process in 2015 and the steps that led to the feasibility study for the two pilot projects.	
Results: The writing of a two-page policy brief on the index insurance initiative for the incoming minister and an index insurance roadmap The development a concept note for implementing an index insurance pilot covering maize and rice value chains in two states. The pilot will take advantage of the infrastructure provided through the GES. A feasibility study has now been carried out for the pilots.	

Submitted on 2016-03-01 at 17:13 UTC

Partners: Nigerian Federal Ministry of Agriculture and Rural Development (FMARD)

CCAFS and its partners (including CIMMYT, IITA, Africa Rice, IRI), supporting understanding and analysis of agro-climatic risks, identification of appropriate seeds and input packages, understanding of interactions of insurance and adoption of improved technologies, and contributing to evaluation;

Cellulant, providing the IT support services and platform for integration through the GES e-wallet;

GIZ, providing technical advice and services with regard to regulation, and coordination of the insurance sector;

Nigerian Agricultural Insurance Corporation (NAIC) providing primary insurance services;

Pula Advisors, providing technical advice and services with regard to insurance pricing, pilot design and execution; and

Swiss Re, providing advice and services with regards to data, pricing, structuring and reinsurance.

Links / Sources for further information: Please see: Hansen, J., Hellin J. and Araba, D. 2015. Building agricultural resilience in Nigeria through index insurance and scaling out of climate smart agriculture. In: Westermann O, Thornton P. and Förch W. (eds.). Reaching more farmers – innovative approaches to scaling up climate smart agriculture. CCAFS Working Paper no. 135. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), pp. 50-55.

6. Activities

Activity #1	
Title: Design and evaluation of index insurance based on technical requirements and acceptability to targeted farmers	
Description: Use information on risk of drought from local to regional scales in maize -based farming systems in Nigeria to determine indices, reduce basis risk and identify role for climate-adapted germplasm. The project will work closely with Rose Goslinga (formerly ACRE) and Nigerian partners.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	Justification: Feasibility study (including data requirements) carried out for the pilots.

Activity #2	
Title: Exploration of feasibility of linking crop index insurance schemes to on-going bilateral research projects	
Description: CIMMYT and IRI wish to link index insurance initiatives with the Drought Tolerant Maize for Africa (DTMA) Project and the Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) Project, The research project is focused on crop insurance bundled with climate-adapted germplasm. The two aforementioned bilateral projects have huge potential to be next users. The project will from the beginning liaise with and work with these projects The project will link these bilateral projects with the key insurers and re-insurers, hence, bringing together many of the players needed to scale up crop index insurance. Judicious work between the research project and these bilateral projects (and other actors) has the potential to significantly increase the use of crop index insurance schemes in East Africa and Nigeria	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-01-2018
Leader: Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	Justification: Engagement of Drought Tolerant Maize for Africa project staff in planning for pilots in Nigeria

Activity #3	
Title: A document capturing lessons learnt from existing crop index insurance targeted at resource-poor farmers	
Description: There are few rigorous documents that capture lessons from on-going, index insurance initiatives that target resource-poor farmers. There are exceptions, for example Kilimo Salama (now called ACRE) in Kenya and HARITA in Ethiopia. IRI and CIMMYT will also analyze other index insurance initiatives (both weather based and area yield) to cover more comprehensively the diversity of initiatives being practiced around the world. We will	

Submitted on 2016-03-01 at 17:13 UTC

Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Greatrex, Helen <greatrex@iri.columbia.edu>, IRI - International Research Institute for Climate and Society	
Status: On-going	Justification: Evolving draft of document with inputs from IRI and CIMMYT

Activity #4	
Title: External funding proposal(s) developed for future crop index insurance research	
<p>Description: There is considerable interest from the public and private sector in: i) Index insurance as a tool for Climate Risk Management; ii) scaling up index insurance and boosting private sector participation and iii) local implementation and impact evaluation. The CCAFS-supported project will submit a proposal during the lifetime of the project designed to further research in crop index insurance for resource-poor farmers.</p> <p>The proposals will be developed with key public and private sector actors taking advantage of IRI's networks and also recently-established links that CIMMYT has made with the Global Index Insurance Facility (GIIF).</p> <p>One of the activities is to have a proposal writing workshop bringing together CIMMYT, IRI and other actors. Project partners will take advantage of these meetings to combine them with a writers' workshop designed to generate a journal article on aspects of the crop index insurance</p>	
Start date (dd-MM-yyyy): 01-01-2017	End date (dd-MM-yyyy): 31-10-2018
Leader: Hellin, Jonathan <j.hellin@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	
Status: On-going	Justification: Discussions with Spanish Development Agency in Costa Rica about possible funding of index insurance initiatives in Central America (building on IRI's work in Honduras)

Lessons regarding your project activities and possible implications for the coming planning cycle: Activities 1 and 2 have advanced in the light of the Nigeria index insurance work.

Submitted on 2016-03-01 at 17:13 UTC

7. Leverages

<Not defined>

Submitted on 2016-03-02 at 10:17 UTC

Title: CIMMYT Improving nitrous oxide estimates globally

Start date (dd-MM-yyyy)	01-01-2015	End date (dd-MM-yyyy)	31-12-2018
Management liaison	F3 - Flagship 3	Mgmt. liaison contact	Wollenberg, Lini <Lini.wollenberg@uvm.edu>
Lead organization	CIMMYT - International Maize and Wheat Improvement Center - Mexico	Project leader	Stirling, Clare <c.stirling@cgiar.org>
Project type	CCAFS COFUNDED	Detailed project workplan	<Not defined>

Project is working on

Flaship(s)	Region(s)
FP3: Low Emissions Agricultural Development	Global: Global

Bilateral project(s) contributing to this project

151 - Scaling of climate smart practices that reduce GHG emissions.

Summary

Effective low-emission development policies depend on accurate, spatially-explicit estimates of GHG emissions that respond to variable soil, climate and management (SCM). Current assumptions of N₂O emissions as a simple percentage of nitrogen (N) fertilization rate are insufficient to identify hotspots and may result in up to a five-fold underestimate of actual emissions according to recent research. At present, there is no fit-for-purpose scalable model to estimate GHG emissions nor are there sufficient data available for adapting or designing suitable SCM-responsive models for GHG emissions in tropical and subtropical wheat- and maize-based cropping systems. This project proposes to address these issues by posing the following questions:

- 1) How can models better quantify N-related smallholder GHG mitigation options?
- 2) How do data requirements, scale, and end-user objectives influence model selection for assessing mitigation priorities?
- 3) What are the critical trade-offs/synergies between GHG mitigation practices and other smallholder objectives?

Submitted on 2016-03-02 at 10:17 UTC

2. Partners

Partner #1 (Leader)

Institution: CIMMYT - International Maize and Wheat Improvement Center

Contacts

Type	Contact	Responsibilities and contributions
Project Leader	Stirling, Clare <c.stirling@cgiar.org>	Activity 2014-127 *Partner*. Activity 2014-128 *Leader*. Activity 2014-133 *Leader*.

Partner #2

Institution: YARA

CCAFS Partner(s) allocating budget: <Not defined>

Contacts

Type	Contact	Responsibilities and contributions
Partner	Brentrup, Dr Frank. <frank.brentrup@yara.com>	YARA will provide an in-kind contribution in the form of 0.5 FTE to sourcing data for model calibration and as a conduit for scaling up and out research outputs. Activity 2014-127 *Partner*.

Partner #3

Institution: University of Aberdeen

CCAFS Partner(s) allocating budget: <Not defined>

Contacts

Type	Contact	Responsibilities and contributions
Partner	Hillier, Jonathon <j.hillier@abdn.ac.uk>	Calibration, application, and validation of models; revision of Stefest-Bouwman model; provision of links to IPCC and international organizations (such as the Cool Farm Alliance) for scaling up, implementation of models into the DSS tool. Activity 2014-128 *Partner*. Activity 2014-133 *Partner*. Activity 2014-127 *Leader*.

Submitted on 2016-03-02 at 10:17 UTC

Partner #4**Institution:** BISA - Borlaug Institute for South Asia**CCAFS Partner(s) allocating budget:** <Not defined>**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Kumar, Raj <E.Duveillier>	Activity 2014-395 *Partner*.

Partner #5**Institution:** CIMMYT - International Maize and Wheat Improvement Center**Contacts**

Type	Contact	Responsibilities and contributions
Partner	Stirling, Clare <c.stirling@cgiar.org>	Sourcing data for model calibration and input to creation of database and its maintenance. Activity 2014-395 *Leader*.

Partnerships overall performance over the last reporting period: Partnerships have generally worked very well. One learning is that where no direct funding is received yet a key partner is providing substantial in-kind inputs to the project means it can be difficult to put too much pressure on meeting project-specific deadlines. This in addition to the absolute caution and scrutiny in vetting outputs where they have clear implications for the private sector partner means additional flexibility has been required in timing of milestones and deliverables.

Lessons regarding your partnerships and possible implications for the coming reporting cycle: See above in relation to milestones and deliverables.

Submitted on 2016-03-02 at 10:17 UTC

3. Locations

Project level	Latitude	Longitude	Name
Region	Not applicable	Not applicable	East Africa
Region	Not applicable	Not applicable	South Asia
Country	Not applicable	Not applicable	India
Country	Not applicable	Not applicable	Mexico

4. Outcomes

4.1 Project outcome narrative

Project outcome statement

We will provide improved data and methods for decision makers to apply in order to support policies that reduce GHG emissions. Internationally, we will target information to the organizations in the Alliance for Climate Smart Agriculture and ensure access to improved data via the IPCC. At national/regional levels, we will interactively recommend a broad range of policies, particularly on N fertilizer subsidies. At the local level, we will work with extension actors to focus on demonstrating the economic benefits of more efficient N use. Best-bet mitigation practices with other co-benefits will be scaled up through bilateral projects, local government, NGOs and the private sector. The project consortium's links and new high impact publications will ensure recognition by international organizations such as IPCC, GRA and FAOSTAT. The outputs will be used by Fertilizer Companies (eg. Yara) as evidence to support the identification of optimal regional fertilizer application strategies and extension activities.

Annual progress towards outcome (end of 2015): Key stakeholders (e.g. fertiliser companies) are increasingly aware of the need and have expressed a demand for an improved model for N₂O prediction based on results produced by project.

Annual progress towards project outcome in the current reporting cycle (2015): We have completed the compilation of a new database of field N₂O emissions for the tropics and sub-tropics. This represents a substantial advance on the respective part of the Stehfest and Bouwman dataset with the number of studies increasing fourfold. The far more substantial task of data collection for Europe, North America and China is due for completion by the end of April 2016. An in depth statistical analysis of the tropical and subtropical dataset has been completed and is in draft paper form with the aim of submitting in the next few weeks. CIMMYT is now part of a Mexican group lead by the Colegio de Postgraduados (COLPOS), that is looking to develop emission factors for wheat and maize across different locations in Mexico. The group was able to obtain some funding from the Mexican Council for Science and Technology (CONACYT) to work on N₂O emissions. This group has participants from several different regions of Mexico; this will allow us to generate more robust N₂O estimates for wheat and maize across the country. In addition CIMMYT has continued its interaction with the EC-LEDS project through the joint organization of a workshop on N₂O data management in Mexico in 2015 for the participants of the CONACYT project. Through the EC-LEDS project we have contacts at the US embassy in Mexico that will be very useful once we are ready (when we have the emission factors for wheat and maize) to reach high level official both in SAGARPA (Ministry of Agriculture) and SEMARNAT (Ministry of the Environment) which are the institutions that will have to address the strategies for N₂O emissions from agriculture. We also have very good contacts with SAGARPA through the MasAgro project that CIMMYT has with SAGARPA and the Mexican government.

Communication and engagement activities have contributed to achieving your Project outcomes: We are being supported in the collation of US data by Applied Geosolutions using NSAID finance and the project data template. Activities and planned outcomes have been communicated at the European Commission DGs for Agriculture and Environment; the Plenary INMS meeting in Lisbon; the EU Nitrogen expert panel meeting in Chantilly, the CFA 2015 AGM . We also have agreement through Bill Salas at Applied Geosolutions, and Jagadeesh Yeluripati at the James Hutton Institute in Aberdeen to provide our dataset and forthcoming models to the GRA modelling platform for cross-comparison with other global N₂O models. See above also for Mexico.

Evidence documents of progress towards outcomes: <Not defined>

Annual progress towards outcome (end of 2016): The improved model for N₂O prediction is incorporated into the Cool Farm Tool and is about to be made available, due to demand, by major fertiliser companies and their partners to inform low carbon practices on farm. A high impact publication has been submitted on the improved model and this together with presentations at conferences/workshops and the project's links are ensuring growing recognition amongst international organisations (e.g. GRA, IPCC) of the potential impact of project outputs on N₂O predictions.

Annual progress towards outcome (end of 2017): Project outputs results in improved data and methods for decision makers to apply in order to support policies that reduce GHG emissions. Project outputs inform international organizations in the Alliance for Climate Smart Agriculture, Fertilizers Europe and the International Fertilizer Association, Sustainable Agriculture Initiative (<http://www.saiplatform.org/>), and access to improved data is ensured via the IPCC and the open database of N₂O emissions measurements.

Annual progress towards outcome (end of 2018): Project outputs are being used to refine climate smart practices. Best-bet mitigation practices with other co-benefits are being scaled through bilateral projects (e.g. MasAgro with linkage to Mexican government's SAGARPA programme, CSISA, SIMLESA).

The project consortium's links and new high impact publications will ensure recognition by international organizations such as IPCC, GRA and FAOSTAT. The outputs are also being used by Fertilizer Companies (eg. Yara) as evidence to support the identification of optimal regional fertilizer application strategies and extension activities.

Lessons regarding your Theory of Change and implications for the coming planning cycle; e.g. how have your assumptions changed, or do you have stronger evidence for them: The results so far do not conclusively discredit the use of the current IPCC default EF nor such tools such as EXACT and CFT for the tropics and subtropics.

4.2 Contribution to CCAFS Outcomes

FP3 - Outcome 2019: Global standards organizations and national decision-makers are planning and implementing low-emissions development initiatives that contribute to food security, using reliable, comparable quantification data and decision support tools.

Indicator #1: FP3 Indicator: # of low emissions plans developed that have significant mitigation potential for 2025, i.e. will contribute to at least 5% GHG reduction or reach at least 10,000 farmers, including at least 10% women.

Submitted on 2016-03-02 at 10:17 UTC

2019	
Target value: 20% reduction in GHG from cereal-based systems.	Cumulative target to date: Cannot be Calculated
<p>Target narrative: Project outputs have the potential to contribute massively to mitigation plans globally. They will lead to improved recommendations for N management in wheat- and maize-based systems globally but will also lend themselves to informed targets for N management in general. We will provide improved data and methods for decision makers to apply to support policies that reduce GHG emissions. Internationally, we will target information to the Alliance for Climate Smart Agriculture, Fertilizers Europe and the International Fertilizer Association, Sustainable Agriculture Initiative, and ensure access to improved data via the IPCC and the open database of fertiliser-related N₂O emissions.</p>	
<p>The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined></p>	

2015		
Target value: Cool Farm Alliance engaged with and made actively aware of project outputs.	Cumulative target to date: Cannot be Calculated	Target achieved: 5.0
<p>Target narrative: Key stakeholders (e.g. fertiliser companies) are increasingly aware of the need and have expressed a demand for an improved model for N₂O prediction based on results produced by project and will be kept informed of progress through the project consortium network.</p>		
<p>Narrative for your achieved targets, including evidence: Awareness raising activities has led to specific interest in the new N₂O model amongst fertiliser companies, international organisations and networks (e.g. YARA, Fertiliser Europe, GRA). The new N₂O model will be incorporated in both the CCAFS-MOT and Cool Farm Tools. The current user base for the CFT is ca. 10,000 farmers. The CCAFS MOT tool is generating very substantial interest among a wide range of users in CCAFS regions. We expect users of the model to number several tens of thousands of farmers worldwide by mid-2017 when it is adopted into CCAFS-MOT and Cool Farm Tool.</p>		
<p>The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined></p>		
<p>Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: Not applicable</p>		

2016	
Target value: 5	Cumulative target to date: Cannot be Calculated
<p>Target narrative: At least 5 fertiliser/supplier/grower organisations using the improved model to inform best practice for GHG mitigation in agriculture. Having been made aware of the utility of the improved N₂O model for estimating GHG emissions, the model is embedded in the Cool Farm Tool and actively promoted amongst CFA member organisations. YARA will also be actively promoting the use of the model amongst its growers.</p>	

Submitted on 2016-03-02 at 10:17 UTC

2016
The expected annual gender and social inclusion contribution to this CCAFS Outcome: Gender and social inclusion will be taken into consideration at a later stage when it comes to barriers to uptake and trade offs.

2014		
Target value: <Not defined>	Cumulative target to date: 0	Target achieved: <Not defined>
Target narrative: <Not defined>		
Narrative for your achieved targets, including evidence: <Not defined>		
The expected annual gender and social inclusion contribution to this CCAFS Outcome: <Not defined>		
Narrative for your achieved annual gender and social inclusion contribution to this CCAFS outcome: <Not defined>		

4.3 Other Contributions

Contribution to other CCAFS Impact Pathways: <Not defined>

Collaborating with other CRPs: <Not defined>

Submitted on 2016-03-02 at 10:17 UTC

4.4 Outcome case studies

There is not an Outcome Case Study added.

Submitted on 2016-03-02 at 10:17 UTC

5. Project outputs

5.1 Overview by MOGs

Major Output groups - 2019
<p>FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
<p>FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives</p> <p>Brief bullet points of your expected annual 2019 contribution towards the selected MOG <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p>
Major Output groups - 2014
<p>FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers</p> <p>Brief bullet points of your expected annual 2014 contribution towards the selected MOG <Not defined></p> <p>Brief summary of your actual 2014 contribution towards the selected MOG: <Not defined></p> <p>Brief plan of the gender and social inclusion dimension of the expected annual output <Not defined></p> <p>Summary of the gender and social inclusion dimension of the 2014 outputs: <Not defined></p>

Submitted on 2016-03-02 at 10:17 UTC

FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

Brief bullet points of your expected annual 2014 contribution towards the selected MOG

<Not defined>

Brief summary of your actual 2014 contribution towards the selected MOG:

<Not defined>

Brief 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>

Major Output groups - 2015

FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

Comprehensive analysis of tropical and sub-tropical dataset indicate (i) differences in N₂O emissions factors between fertiliser types and regions and (ii) that the use of the current IPCC default EF or such tools as the EXACT and Cool Farm Tools for tropics and subtropics are within the acceptable range.

Brief 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:

Not applicable

FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

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

<Not defined>

Brief summary of your actual 2015 contribution towards the selected MOG:

Our studies in India indicate that there is the potential for substantial GHG savings by targeting cereal producers with NUE < 25%, of which there are many. The global analysis (to be completed in 2016) will support more robust identification of regional effects and region-specific optimisation of N use.

Brief 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:

Preparation of paper on implications for gender of improved nitrogen use in high and low N fertiliser systems.

Submitted on 2016-03-02 at 10:17 UTC

Major Output groups - 2016

FP3 - MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

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

- Significant contribution to setting minimum data standards for field based N2O studies.
- On-demand open access to unique, quality controlled global database on N2O emissions
- New model describing global emissions of N2O from agricultural soils.

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

Insufficient funds to address this.

FP3 - MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

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

- raising awareness with the production of an high impact publication on new N2O emissions model
- greater confidence that the analysis of mitigation-interventions especially in the tropics are directionally correct.
- Use of benchmark, good quality datasets for model calibration and comparison.

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

Insufficient funds to address this.

Lessons regarding your major outputs groups (MOGs) and possible implications for the coming planning cycle: annual report 2015

Submitted on 2016-03-02 at 10:17 UTC

5.2 Deliverables

Deliverable #1

Main Information	
Title: Establish field trials on N management and GHG emissions in India and Mexico.	
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Data
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: Field trials established and data for GHG emissions and associated crop performance generated for one whole season in wheat and maize in Mexico and India. Several publications:

Next-user
National partner scientists and modellers.
Knowledge, attitude, skills and practice changes expected in next-user: Learning and training platform for interested scientists and students on GHG quantification methods.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Forging partnerships through workshops/meetings and training events and internships.

Partners contributing to this deliverable
Partner #1 (Responsible): Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>

Submitted on 2016-03-02 at 10:17 UTC

Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #2

Main Information
Title: Development and inclusion of economic-environmental model of GHG emissions.
MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives
Main Type: Tools and Computer Software
Sub Type: Platforms
Year of expected completion: 2017
Status: <Not defined>

Next-user
CCAFS and its stakeholders including users of the CCAFS Mitigation Option Tool..
Knowledge, attitude, skills and practice changes expected in next-user: Greater insight into how much mitigation can be achieved at what cost, and where policies should focus.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The same strategies as used to increase awareness and use of CCAFS mitigation screening tool.

Partners contributing to this deliverable

Submitted on 2016-03-02 at 10:17 UTC

Partner #1 (Responsible): Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen**Partner #2:** Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #3

Main Information
Title: Recommendations for best modelling approaches to address stakeholder requirements for mitigation in cereal systems.

Submitted on 2016-03-02 at 10:17 UTC

MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives

Main Type: Tools and Computer Software

Sub Type: Tools

Year of expected completion: 2018

Status: <Not defined>

Next-user

Local government, state and national policy personnell, extension agent, scientific community.

Knowledge, attitude, skills and practice changes expected in next-user: Knowledge of end-user requirements and how/which models can best meet these with a greater appreciation why it is better to be roughly right than precisely wrong!

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Workshops, reports and publications.

Partners contributing to this deliverable

Partner #1 (Responsible): Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>

License adopted: <Not defined>

Dissemination Channel: <Not defined>

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Submitted on 2016-03-02 at 10:17 UTC

Language: <Not defined>**Coverage:** <Not defined>**Deliverable Data sharing****Deliverable files**

<Not defined>

Deliverable #4**Main Information****Title:** Robust evidence-base support of climate smartness of N management practices at field level.**MOG # 2:** Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives**Main Type:** Data and information outputs, including datasets, databases and models**Sub Type:** Data**Year of expected completion:** 2017**Status:** <Not defined>**Next-user**

Local government, state and national policy personnell, extension agent, scientific community.

Knowledge, attitude, skills and practice changes expected in next-user: Science based evidence of emission reduction along with agronomic productivity and economic profitability to determine the climate smartness appropriate N management techniques in maize and wheat based systems.**Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes:** Synergy and trade-off analysis. Reports and publications.**Partners contributing to this deliverable****Partner #1 (Responsible):** Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center**Deliverable Ranking****Address gender and social inclusion aspect** <Not defined>**Potential for/ actual contribution to outcomes** <Not defined>**Level of shared ownership (partnerships across org.)** <Not defined>**What is your personal perspective of the importance of this product** <Not defined>

Submitted on 2016-03-02 at 10:17 UTC

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #5

Main Information
Title: Analysis of landscape-level N2O emission mitigation strategies in maize- and wheat-based cropping systems.
MOG # 2: Decision support for identifying and prioritizing low-emissions CSA options, including synergies and tradeoffs with development objectives
Main Type: Data and information outputs, including datasets, databases and models
Sub Type: Data
Year of expected completion: 2017
Status: <Not defined>

Next-user
Scientific community, policy personnel, funding agencies, fertilizer companies

Submitted on 2016-03-02 at 10:17 UTC

Knowledge, attitude, skills and practice changes expected in next-user: Better understanding of the effect of precision N management on N₂O emission and total production at district, state and country level

Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Reports, policy papers, workshop/meetings, peer reviewed articles

Partners contributing to this deliverable

Partner #1 (Responsible): Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking

Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination

Open access restriction: <Not defined>

License adopted: <Not defined>

Dissemination Channel: <Not defined>

Dissemination URL: [<Not defined>](#)

Deliverable Metadata

Description: <Not defined>

Creator / Authors: <Not defined>

Author Identifier: <Not defined>

Publication / Creation date: <Not defined>

Language: <Not defined>

Coverage: <Not defined>

Deliverable Data sharing

Deliverable files

<Not defined>

Submitted on 2016-03-02 at 10:17 UTC

Deliverable #6

Main Information	
Title: Open access database of N2O emissions from agricultural soils will be made available on request.	
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Databases
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: Open access database has been created and populated with data from tropical and sun-tropical regions. Currently in the process of collating the remaining global dataset which will be completed in April 2016.

Next-user
Researchers, fertiliser companies and trade associations; agricultural consultancies and decision makers.
Knowledge, attitude, skills and practice changes expected in next-user: Comprehensive reporting of experimental N2O data to standardised specification as in the database.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available on an online repository. The vehicle for exploitation will be developed in the other activities.

Partners contributing to this deliverable
Partner #1 (Responsible): Brentrup, Dr Frank. <frank.brentrup@yara.com>, YARA
Partner #2: Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen
Partner #3: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	1
Potential for/ actual contribution to outcomes	4
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	4

Deliverable dissemination
Open access restriction: <Not defined>

Submitted on 2016-03-02 at 10:17 UTC

License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #7

Main Information	
Title: Curation of open-access database of N2O emissions from agricultural soils.	
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Databases
Year of expected completion: 2016	
Status: <Not defined>	

Next-user
Researchers, fertiliser companies and trade associations; agricultural consultancies and decision makers.
Knowledge, attitude, skills and practice changes expected in next-user: Comprehensive reporting of experimental N2O data to standardised specification as in the database.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available on an online repository. The vehicle for exploitation will be developed in the other activities.

Submitted on 2016-03-02 at 10:17 UTC

Partners contributing to this deliverable
Partner #1 (Responsible): Brentrup, Dr Frank. <frank.brentrup@yara.com>, YARA
Partner #2: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #3: Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #8

Submitted on 2016-03-02 at 10:17 UTC

Main Information	
Title: Curation of open-access database of N2O emissions from agricultural soils.	
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Databases
Year of expected completion: 2017	
Status: <Not defined>	

Next-user
Researchers, fertiliser companies and trade associations; agricultural consultancies and decision makers.
Knowledge, attitude, skills and practice changes expected in next-user: Comprehensive reporting of experimental N2O data to standardised specification as in the database.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available on an online repository. The vehicle for exploitation will be developed in the other activities.

Partners contributing to this deliverable
Partner #1 (Responsible): Brentrup, Dr Frank. <frank.brentrup@yara.com>, YARA
Partner #2: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #3: Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Submitted on 2016-03-02 at 10:17 UTC

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #9

Main Information	
Title: Curation of open-access database of N2O emissions from agricultural soils.	
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Databases
Year of expected completion: 2018	
Status: <Not defined>	

Next-user
Researchers, fertiliser companies and trade associations; agricultural consultancies and decision makers.
Knowledge, attitude, skills and practice changes expected in next-user: Comprehensive reporting of experimental N2O data to standardised specification as in the database.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: The database will be made available on an online repository. The vehicle for exploitation will be developed in the other activities.

Partners contributing to this deliverable
Partner #1 (Responsible): Brentrup, Dr Frank. <frank.brentrup@yara.com>, YARA

Submitted on 2016-03-02 at 10:17 UTC

Partner #2: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Partner #3: Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #10

Main Information
Title: Analysis and publication submitted on tropical N2O dataset.
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

Submitted on 2016-03-02 at 10:17 UTC

Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2015	
Status: On-going	Justification for cancelling the deliverable: A draft of the paper on the tropical and sub-tropical dataset has been produced and is currently being reviewed by the project team. The aim is to submit the publication by the end of March at the latest.

Next-user
CCAFS Mitigation Option Tool, partners involved with the Cool Farm Alliance and we will also target alignment with IPCC methodology.
Knowledge, attitude, skills and practice changes expected in next-user: Reliable predictors of average N ₂ O emissions in response to N management will inform sustainable sourcing strategies of major multinational through the Cool Farm Tool (used in over 15,000 farms globally to date).
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: We will also publish in the scientific literature on both the model development and its application using spatially disaggregated soil, climate and fertilisation rate data (either 2015 or 2016)

Partners contributing to this deliverable
Partner #1 (Responsible): Brentrup, Dr Frank. <frank.brentrup@yara.com>, YARA
Partner #2: Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen
Partner #3: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Deliverable Ranking	
Address gender and social inclusion aspect	1
Potential for/ actual contribution to outcomes	5
Level of shared ownership (partnerships across org.)	5
What is your personal perspective of the importance of this product	5

Deliverable dissemination
Open access restriction: Yes
License adopted: <Not defined>
Dissemination Channel: -1
Dissemination URL: <Not defined>

Submitted on 2016-03-02 at 10:17 UTC

Deliverable Metadata
Description: NB still in draft form
Creator / Authors: F.Albanito, Ulrike Lebender, Tek Sapkota, Thomas Cornulier, Frank Brentrup, Clare Stirling, Jon Hillier
Author Identifier: <Not defined>
Publication / Creation date: Still in draft
Language: english
Coverage: tropical and sub-tropical
Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #11

Main Information
Title: A technical specification for inclusion of the new N2O model in the Cool Farm Tool. Inclusion of the new model in the CCAFS decision support tool (developed by the University of Aberdeen).
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers
Main Type: Tools and Computer Software
Sub Type: Tools
Year of expected completion: 2016
Status: <Not defined>
Next-user
CCAFS, Cool Farm Alliance. We will also target alignment with IPCC methodology in order to allow scope for revision of the IPCC guidelines when this is next scheduled.
Knowledge, attitude, skills and practice changes expected in next-user: The implementation in the CCAFS screening tool will allow for greater confidence that interventions in terms of nutrient supply are directionally correct. It will also enable spatially targeted cost benefit analyses to be conducted when combined with economic assessments.
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Announcements of development will be made on the Cool Farm Alliance websites and by Jon Hillier through Cool Farm Alliance annual meetings. The Cool Farm Alliance runs coordinated publicity programmes with many of its more active members among which Fertilizers Europe, Unilever, and the SAI platform.

Submitted on 2016-03-02 at 10:17 UTC

Partners contributing to this deliverable
Partner #1 (Responsible): <Not defined>

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #12

Main Information
Title: At least three publications including a high impact publication on the new global N2O model.
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers

Submitted on 2016-03-02 at 10:17 UTC

Main Type: Peer reviewed Publications	Sub Type: Peer-reviewed journal articles
Year of expected completion: 2016	
Status: <Not defined>	

Next-user
CCAFS Mitigation Option Tool, partners involved with the Cool Farm Alliance and we will also target alignment with IPCC methodology.
Knowledge, attitude, skills and practice changes expected in next-user: Reliable predictors of average N2O emissions in response to N management will inform sustainable sourcing strategies of major multinational through the Cool Farm Tool (used in over 15,000 farms globally to date).
Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Communication activities around the publication, presentation at conferences and meetings with key stakeholders.

Partners contributing to this deliverable
Partner #1 (Responsible): Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center
Partner #2: Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen
Partner #3: Brentrup, Dr Frank. <frank.brentrup@yara.com>, YARA

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>

Submitted on 2016-03-02 at 10:17 UTC

Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

Deliverable #13

Main Information	
Title: Production of N2O emissions for at least two complete crop cycles	
MOG # 1: Methods and data for quantifying low-emissions agriculture options appropriate to smallholder farmers	
Main Type: Data and information outputs, including datasets, databases and models	Sub Type: Databases
Year of expected completion: 2018	
Status: <Not defined>	

Next-user
Crop modellers, scientists and ultimately decisions makers at farm and policy levels.
<p>Knowledge, attitude, skills and practice changes expected in next-user:</p> <ul style="list-style-type: none"> • National scientists and students trained on GHG quantification methods. • Farmers follow appropriate fertilization practice to get adequate yield with minimum environmental impact • Decision makers are provided with robust evidence base on site-specific nutrient management for optimum yield, profitability and minimum environmental footprint.
<p>Strategies (facilitation, engagement, knowledge sharing etc.) will be used to encourage and enable next-user to utilize deliverables and adopt changes: Database used for model calibration and validation.</p> <p>Models used for landscape-level quantification.</p> <p>Policy papers prepared and presented at appropriate fora.</p>

Partners contributing to this deliverable
Partner #1 (Responsible): Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Submitted on 2016-03-02 at 10:17 UTC

Deliverable Ranking	
Address gender and social inclusion aspect	<Not defined>
Potential for/ actual contribution to outcomes	<Not defined>
Level of shared ownership (partnerships across org.)	<Not defined>
What is your personal perspective of the importance of this product	<Not defined>

Deliverable dissemination
Open access restriction: <Not defined>
License adopted: <Not defined>
Dissemination Channel: <Not defined>
Dissemination URL: <Not defined>

Deliverable Metadata
Description: <Not defined>
Creator / Authors: <Not defined>
Author Identifier: <Not defined>
Publication / Creation date: <Not defined>
Language: <Not defined>
Coverage: <Not defined>

Deliverable Data sharing
Deliverable files <Not defined>

5.3 Summary on next-users

Next user #1
<p>Key next user for the current reporting period. Key game changers. Observed Knowledge, Attitude, Skills and practice changes: Fertilisers Europe Nitrogen expert panel. Through communication of the project at the Nitrogen Expert Panel meetings (Frank Brentrup and Jon Hillier) in June and November 2016 the model we develop will be included in two very significant UK-China (N-circle – UK lead Prof Pete Smith) and UK-India (NEWS-India – UK lead Prof Mark Sutton) collaborations. These are part-funded by the UK research council BBSRC.</p> <p>The Cool Fam Alliance members from the European fertiliser industry are fully engaged through Fertiliser Europe and receives regular updates on progress. Yara is an active project partner. Fertilisers Europe is now engaging the International Fertilizer Association (IFA) to support a more global initiative and common accounting methodology for N fertiliser based emissions based around its own industry production data and the model we are developing.</p> <p>The research plots in India and Mexico are being used as learning platforms for students and national partner scientists as well as a means for disseminating information about precision N application methods to university researchers, government extension works, local NGOs and farmer leaders.</p>
<p>Strategies (facilitation, engagement, knowledge sharing etc.) you used to encourage and enable this next user to utilize deliverables and adopt changes: We will continue to use the very effective vehicles for engagement and knowledge exchange we have to date with international organisations and networks together with national institutions in India and Mexico including links with government such as SAGARPA and the Colegio de Postgraduados (COLPOS): Network Coordination of activities leading to the development of emission factors in wheat and maize across different regions of Mexico.</p>
<p>Reported deliverables serve as evidence towards this achieved change: A draft of what is intended to be a high-impact publication to be submitted March 2016.</p>
<p>Lessons and implications for the next planning cycle: That multiple investment is being made over the next 3 years in understanding and reducing losses and inefficiencies in the global reactive nitrogen cycle. This project is now known with regard to the other initiatives (described above) and we will look to act in a more integrated way with them in up to 2018 to ensure the maximum leveraged impact for our project.</p>

5.4 Project highlights

Project highlight Information #1	
Title: Nitrous oxide emissions from wheat respond exponentially to increasing fertiliser N rate in Mexico.	
Author: Ivan Ortiz-Monasterio	Subject: Greenhouse gas emissions
Publisher: Ivan Ortiz-Monasterio	Year: 2015
Project highlights types Breakthrough science	Start date: 2016-03-01
End date: 2016-03-01	Is global: Yes
Country:	Keywords: tropics subtropics nitrous oxide emissions
<p>Highlight description: • We measured N₂O fluxes from irrigated spring wheat in NW Mexico fertilized at five N rates.</p> <ul style="list-style-type: none"> • N₂O responded in an exponentially increasing fashion to increasing N rate. • Reducing N rate in wheat can significantly reduce N₂O emissions without harming yield. • Our results can be used to provide carbon credits to farmers for more precise fertilizer use. 	
<p>Introduction / Objectives: We measured N₂O fluxes from irrigated spring wheat in NW Mexico fertilized at five N rates. Emissions of nitrous oxide (N₂O) increase following soil management activities, especially fertilizer N application, and particularly when this input exceeds crop requirement. Our major objectives were to 1) investigate trade-offs between fertilizer N input, spring wheat yield, and N₂O emissions, to inform management strategies that can mitigate N₂O emissions without compromising productivity and economic return, and 2) explore opportunities for farmers to take advantage of global carbon markets, and generate income from any improved N management practices they adopt.</p>	
<p>Results: Manual chambers were used to observe N₂O fluxes from spring wheat at five N inputs (0, 80, 160, 240, and 280 kg N ha⁻¹) during two growing seasons at CIMMYT in Ciudad Obregon, Sonora, Mexico. Average daily N₂O fluxes were between 1.9 ± 0.5 and 13.4 ± 2.8 g N₂O-N ha⁻¹, with lower emissions at N rates below those that maximized yield, and substantially higher emissions at N rates beyond where yield was maximized. The exponential response, consistent with other crops, suggests large decreases in N₂O emissions are possible with lower N inputs and without negative yield impacts. We determined the technical potential for N₂O mitigation in spring wheat in the Yaqui Valley over two seasons in terms of carbon dioxide equivalents (CO₂e; the common metric used for trading agricultural GHG offsets in carbon markets). In both years, we assumed a maximum of 75% of the 225,000 ha cropland was planted to spring wheat (i.e., ~169,000 ha), and used our calculated most economic rate of N or MERNs (134 and 158 kg N ha⁻¹ in first and second season, respectively) as the hypothetical N fertilizer rates to which average rates across the region (300 kg N ha⁻¹; ref) were reduced to. Thus, the N₂O mitigation potential was estimated as 79 and 128 Gg CO₂e in 2013 and 2014, respectively. With fertilizer use patterns in Yaqui Valley a likely gauge for high-productivity irrigated cereal systems elsewhere, our results provide evidence for a win-win-win scenario; large reductions in agricultural GHG emissions, increased farmer income, and maintained or even improved productivity.</p>	
<p>Partners: Neville Millar^{1,2}, Kevin Kahmark¹, G. Philip Robertson^{1,2}, ¹ W.K. Kellogg Biological Station, Michigan State University ² Dept. of Plant, Soil and Microbial Sciences, Michigan State University</p>	
Links / Sources for further information: Manuscript in preparation	

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6. Activities

Activity #1	
Title: Open database and improved practical method to predict N ₂ O emissions.	
Description: We will establish an open resource of N ₂ O emissions measurements from agricultural soils as a function of agricultural management and soil and climate conditions. The database will be made available to the wider community to allow practitioners to input and make use of new experimental data as it emerges. The database will form the basis for a revision of the Stehfest and Bouwman 2006 models. As well as a simple revision we will also explore options to add further granularity and responsiveness to the model, among which are an exploration of the capacity to include an N-balance (in preference to N-rate) as an explanatory variable, and the possibility of developing distinct regional models to replace the global one or Stehfest and Bouwman.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-12-2018
Leader: Hillier, Jonathon <j.hillier@abdn.ac.uk>, University of Aberdeen	
Status: On-going	Justification: A detailed review was undertaken of the literature published in peer-review journals on studies based on agricultural land with in situ measurements of N ₂ O. The Web search was complemented with a search through the literature cited in the articles found as well as the study of Stehfest and Bouwman (2006). The data extracted contained key information of the experimental sites when available such as: site name and geographical coordinates (Latitude, Longitude), fertilizer types, quantity of fertilizer applied, number of fertilizer applications, mode of fertilizer application, crop types and number of crops cultivated during the experiment, effective duration of the experiment and months included in the crop season, soil type, soil pH, total soil carbon and N, soil sand silt and clay content, cultivation practices such as tillage, irrigation and lime application, long term precipitation and air temperature, cumulative N ₂ O emission over the study period, size area of the chamber technique use to collect N ₂ O, and details on the number of gas samples collected, as well as parameters related to the crop growth performance such as crop dry matter yield and biomass yield. The analysis of N ₂ O emission using a GAMM model from tropical and sub-tropical countries included 48 scientific publications spread across four continents and 14 countries, which provided 423 distinct measure values of N ₂ O emissions from common zero—fertilizer control and fertilized plots. 52% of the studies were based in Asia, 25.06% in Central & S. America, 19.15 in Africa, and 3.07% in Australia.

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Activity #2	
Title: Improved N ₂ O emissions data from wheat-/maize-based systems through generation of in-country data.	
Description: Nitrous oxide emissions will be quantified in a series of field trials established for wheat- and maize-based systems in Mexico and India. The mitigation potential of efficient N management practices will be quantified, with treatments including: (1) In Mexico, sensor-based N management, nitrification inhibitors and slow release sources of N in irrigated wheat-based and rainfed maize systems. (2) In India, precision nutrient management on GHG emissions in irrigated rice-wheat, rice-maize and maize-wheat based systems.	
Start date (dd-MM-yyyy): 01-01-2015	End date (dd-MM-yyyy): 31-01-2018
Leader: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center	

Submitted on 2016-03-02 at 10:17 UTC

Status: On-going**Justification:** Mexico:

The wheat experiment looking at different N managements (sensor based management, nitrification inhibitors and slow release sources of N) was established in NW Mexico successfully and the soil and gas (CO₂, CH₄ and N₂O) samples were collected as programmed. Currently data are being analysed. The crop performance data was also collected successfully; we have yield data and yield components. This particular site has relatively high levels of residual soil nitrogen, even though we grew an unfertilized crop previous to the establishment of the experiment to bring the levels of residual soil N down. These relatively high levels of residual N made it difficult to observe grain yield differences among treatments.

The maize experiment looking at increasing rates of N was establish successfully in the Central highlands and all the soil and gas samples were collected as planned. This was the first year of this experiment and the data are being analysed. We also had a similar problem as with the wheat crop in NW Mexico, although we planted an unfertilized oat crop during the winter to bring down the levels of residual soil N. The response to increasing rates of N applications was observed but only at the low rates of N.

India:

Two field trials (one in rice-wheat system in Karnal and another in maize-wheat system in Pusa) were established to study N₂O emission as a function of N fertilization rate and methods of application. The main objectives of these trials were to evaluate the N₂O mitigation potential of efficient N management practices (rate and method of application) in rice-wheat and maize-wheat system. The trials were established during autumn of 2014 in rice season in Karnal and maize season in Pusa. Since then we continuously measured N₂O emission until the last fertilization of winter crop 2015-16. We have N₂O emission database from two cropping systems under different rate and methods of N fertilization. Our previous measurements under similar cropping systems in the same environment revealed that respectively 2.59 and 1.92% of applied N emitted in rice and wheat is lost as N₂O emission. However, in those trials we did not have zero N treatment to quantify background emission. One of the advantages of the N₂O measurement trials established under global N₂O project is to be able determine the emission factor for N fertilizer application after discounting background emission (with Zero N treatment).

The overall objective is to develop location specific

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	emission factor and to identify best-bet N management strategies from agronomic and environmental point of view. We have just completed measurement and will analyse the data and report the output in 2016.
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Activity #3

Title: Recommendations for the most applicable modelling approaches to determine best-bet N2O mitigation strategies.

Description: A parallel work stream to Activity #2 will be to calibrate, evaluate and improve one or more process-based (e.g. DSSAT/DAYCENT, APSIM) models for GHG emissions from maize/wheat-based systems and then cross- compare with the new empirical model and site data generated from Activity #2. The principle aim of the work stream will be to determine how the suitability of different types of models depend on the spatial scale modelled e.g. at which point is there sufficient added value to adopt a process-based model over the improved empirical one (developed under Activity #1). We will engage with key partners and policy makers to (i) evaluate how process-based models may be used in such a way as to make the outputs immediately useable by decision makers and (ii) to prioritise and invest in productive and adaptive practices with N2O mitigation co-benefits in maize and wheat-based system.

Start date (dd-MM-yyyy): 01-01-2015

End date (dd-MM-yyyy): 31-12-2018

Leader: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Status: On-going

Justification: The major part of this activity will begin once analysis of the data from the field trials is completed and ready to be used for model calibration. Initial efforts will focus on calibrating the DSSAT models at our sites followed by some 'virtual' modelling experiments at the site level.

Activity #4

Title: BILATERAL - Scaling of climate smart practices that reduce GHG emissions.

Description: Best-bet mitigation practices with other co-benefits will be scaled up through CCAFS FP1.1 climate smart villages and bilateral projects (e.g. MasAgro, USDA-EC LEDS project in Mexico and its contacts; CSISA; SIMLESA). Local government, NGOs and the private sector will implement best-bet mitigation practices, including efficient N management recommendations from the project. An example of how these bilateral projects are supporting and contributing to the CCAFS Project on Global N emissions is described below for the bilateral component in Mexico.

Start date (dd-MM-yyyy): 01-01-2015

End date (dd-MM-yyyy): 31-01-2018

Leader: Stirling, Clare <c.stirling@cgiar.org>, CIMMYT - International Maize and Wheat Improvement Center

Submitted on 2016-03-02 at 10:17 UTC

<p>Status: On-going</p>	<p>Justification: We have developed and continue to strengthen an international alliance among several institutions to address mitigation practices for wheat and maize. In Mexico there are three international institutions participating which are CCAFS-CIMMYT, USDA- EC LEDS and KBS - MSU, these institutions are providing funding and technical support. On the Mexican side the following institutions are participating; Colegio de Postgraduados (COLOPOS), Instituto Nacional de Investigaciones forestales, Agrícolas y Pecuarias (INIFAP), Universidad Autonoma de Baja California (UABC), and Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT) as a network of scientists collecting N₂O data for maize a wheat in several regions of Mexico. In addition, the Consejo Nacional de Ciencia y Tecnologia (CONCYT) has also provided some funding to support field measurements. During 2015 USDA- EC LEDS and KBS-MSU decided to join efforts to provide technical support for the network of Mexican scientists as a result of that a workshop was organized by USDA – EC LEDS, KBS – MSU and CCAFS- CIMMYT to provide training on N₂O data collection and data management. This network has worked successfully and there are plans for these activities to continue during 2016.</p>
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Lessons regarding your project activities and possible implications for the coming planning cycle: Activity#1: Such data tend to be by nature unbalanced and relatively sparse which entailed a more detailed statistical analysis that we anticipated. However, the GAMM method employed in the above proved fruitful and will be used in the upcoming global analysis.

Activity#2: One lesson was finding out that one of the sources of slow release N, floated when the irrigation was introduced in the plots. We were planning to incorporate all sources of N fertilizer with the irrigation but this was very difficult with this source. Therefore, the following cycle we shall incorporated this source to avoid this problem.

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7. Leverages

<Not defined>