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RESEARCH PROGRAM ON
Climate Change, Agriculture and Food Security

CGIAR

CCAFS

# Training Workshop report

# *Implementation of the CSA Monitoring to assess adoption of Climate Smart Agricultural options and related outcomes in Doyogena Climate-Smart landscape (Ethiopia)*

Activity 1.1 - CCAFS-EC grant reference: **2000002575**
CIAT-Program Participant contract #: **C-103-19**

**Osana Bonilla-Findji and Anton Eitzinger**

**December 2019**

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CCAFS Activity Report

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# Contents

# Background

Led by the International Center for Tropical Agriculture (CIAT), the Climate Change, Agriculture and Food Security (CCAFS) Program is a collaboration among all 15 CGIAR Research Centers. It brings together some of the world's best researchers in agricultural science, climate science, environmental and social sciences to identify and address the most important interactions, synergies and trade-offs between climate change and agriculture. CCAFS aims to define and implement a uniquely innovative and transformative research program to help vulnerable rural communities adjust to global changes in climate and overcome the threats posed to agriculture and food security.

Fully aligned with this global effort, CIAT together with ICRAF, ICRISAT and ILRI started implementing the EU-IFAD funded project "Building livelihoods and resilience to climate change in East & West Africa". The projects' overall goal will be achieved through supporting large-scale adoption of climate-smart agricultural (CSA) technologies and practices and fulfilling two main objectives:

(i) to derive new knowledge on scalable CSA technologies and institutional options with demonstrable benefits to women and men farmers, youth employment, climate resilience and low emissions development; and

(ii) to engage in on-going development and private sector initiatives to assist in prioritization of best bet options and in policy development.

The primary project outcome is to provide incentives (financial, technical and policy) to support 0.4 million farmers to adopt climate-smart practices and technologies, which explicitly contribute to increased resilience to climate shocks across a range of time-scales.

To address the challenge of how to transit to CSA at scale, CCAFS Flagship 2 (FP2) will produce and appropriately disseminate field-based evidence and information to support these investments. The best-bet CSA options for target geographies will be determined through collaborative work with partners aiming to test, evaluate, promote and scale up CSA technologies and practices that met the needs of farmers – including women and marginalized groups.

This first training workshop held in Ethiopia on the CSA Monitoring framework is contributing to the projects' Activity 1.2: the assessment of CSA options in the climate-smart villages (CSV) and to the Output 1: "Five technological or institutional CSA options that can be scaled up with smallholder farmers in Ethiopia".

The training workshop aimed to build local capacities to implement the CSA Monitoring Framework order to assess i) the adoption of promising Climate Smart Agricultural options promoted in the Ethiopia study site and ii) their related outcomes on household's livelihoods, food security and resilience. The Monitoring framework consists of a set of robust indicators allowing tracking expected outcomes in the Productivity/Food Security and Adaptation pillars. The key research questions addressed include:

- Who in the Dogoyena CSV is adopting which CSA technologies and practices and which are their motivations or constraining factors? and
- Which are the gender-disaggregated perceived effects of CSA options on farmers' livelihood (agricultural production, income, food security, food diversity and adaptive capacity) and on key

gender dimensions (participation in decision-making, participation in CSA implementation and dis-adoption, control and access over resources and labor).

# Objectives

## Main objective

To carry out a technical training workshop to build the capacities of the local team and key partners involved in the fieldwork in the Doyogena Climate-Smart Landscape to implement the annual CSA monitoring framework in 2019 and onwards over the project timeline.

## Specific objectives

1. To tailor the CSA Monitoring framework and ICT-based data collection tool (Geofarmer) developed by CCAFS FP2 to the Doyogena context-specific conditions and identify the key CSA options promoted in the site to support the rehabilitation of degraded landscapes and ecosystems, and the enhancement of farmer resilience, and which shall be tracked with the Monitoring.
2. Specifically build the capacity of a Supervisor (future trainer of trainers) to technically be able to annually manage/adjust the monitoring App and lead the local implementation of the Monitoring framweork.
3. Support the local team (enumerators and supervisors) in the first days of field data collection in Doyogena and ensuring a smooth transition to full implementation.

# Expected outputs

- ✓ Glossary of key CSA options to support the rehabilitation of degraded landscapes and ecosystems
- ✓ CSA monitoring App and questionnaire tailored to Doyogena CSV site (Ethiopia) and ready for implementation (available upon request)
- ✓ CSA monitoring training delivered in Doyogena (ppt presentation and Photos)
- ✓ Workshop participants list: CCAFS EA, local **partners and enumerators trained and ready to start implementation (to be led by CCAFS EA/ILRI team)**

# The Doyogena Climate-Smart Landscape

The Doyogena Climate Smart Landscape is located in Kembata Tembaro zone, Southern Nations, Nationalities, and People's Region (SNNPR) of Ethiopia. The CSV is in a highland with altitude ranging from 2420 - 2740 meters above sea level (SNNPR Bureau of Finance and Economic Development, 2017). The district where is situated has a mean annual minimum and maximum temperature of 12.6°C and 20°C, respectively and a mean annual rainfall ranging from 1,000 – 1,400 mm. There are two rainfall seasons in the area; Belg (the short rainy season) from January to March and Meher (main rainy season) from June to October. The main economic activity in the area involves mixed farming system with Enset- cereal - livestock production. The main types of cereal crops grown in the area are wheat, barley, legumes and vegetable like beans and potato. Enset (Ensete ventricosum) which is an important source of food is grown in the area by almost all households. Livestock production includes

cattle, sheep and poultry. Agriculture is the main means of livelihood for the community. The majority are subsistent farmers with an average land size of 0.5 ha. The main source of income for the Kembata Tembaro zone is sale of wheat, beans, potatoes, livestock & livestock products, and rural/urban labouring. Rainfed, small-scale, subsistence farming is increasingly threaten by climate related changes such as greater variability in the expected onset and cessation of rainfall but also as heavy rains, storms/strong winds, low temperatures, frost and droughts. This area of steep topography also suffers from land degradation and a decline in soil fertility. These extreme changes are likely to lead to increased crop failures, pest and disease outbreaks, and water scarcity.Previous farming practices were aggravating the soil erosion problem.


As a result, crop production was declining due to loss of soil fertility and some farmers were forced to abandon part of their unproductive plots. In addition, land degradation caused shortage of fodder forcing farmers to buy fodder from their limited resources, put pressure on Enset to feeding their cattle and a burden on women and children mainly responsible for feeding and fodder harvesting. Lack of forage was also one of the constraining factors for breeding improved livestock varieties, which have better productivity.

To tackle these challenges, locally relevant climate smart agriculture (CSA) practices that are both sustainable and resilient to climate change are being tested and promoted to build agricultural livelihoods in Doyogena. This participatory work is undertaken with the strategic support of local partners such as Inter Aide, Areka Agricultural Research Center (AARC) and three CGIAR centers (International Center for Tropical Agriculture (CIAT), International Center for Agricultural Research in the Dry Areas (ICARDA), International Livestock Research Institute (ILRI). This is part of so called climate-smart villages (CSVs) approach developed by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) as a means of performing agricultural research for development (AR4D) that robustly tests technological and institutional options to manage climatic variability, achieve food security, enhance adaptation and mitigation strategies and build resilience.


## Site specific tailoring of the Monitoring framework

Prior to the Monitoring training, a preliminary tailoring phase was necessary to adjust the Survey questionnaire to Doyogena site-specific condition. The information collected and validated with local teams is registered in Annex 1. It includes socio-cultural information (e.g ethnic groups), specific "hunger"months, main crops/livestock, local currency, specific villages to be surveyed etc.

Within the Doyogena Climate-smart landscape, seven villages were prioritized to be covered by the CSA monitoring: Tula, Suticho, Gewada, Cholola 2, Tachignaw Genjo, Duna and Gatame 1.

### Targeted CSA resilience-building options

Eleven promising CSA options tested in Doyogena were prioritized for the monitoring exercise:

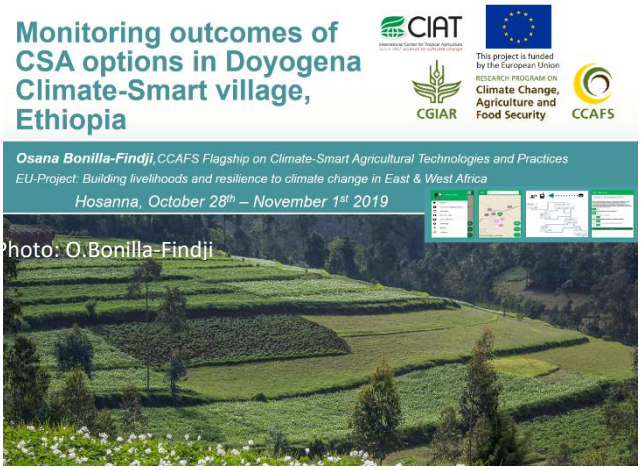
1. Terraces with Desho grass (*Pennisetum pedicellatum*) a soil and water conservation measure
2. Controlled grazing
3. Improved wheat seeds (high yielding, disease resistant & early maturing)
4. Improved bean seeds (high yielding)
5. Improved potato seeds (high yielding, bigger tuber size)
6. Cereal/potato-legume crop rotation (Nitrogen fixing & non-N fixing)
7. Residue incorporation of wheat or barley
8. Green manure: vetch and/or lupin during off-season (N fixing in time)
9. Improved breeds for small ruminants (Sheep)
10. Agroforestry (woody perennials and crops)
11. Cut and carry for animal feed.

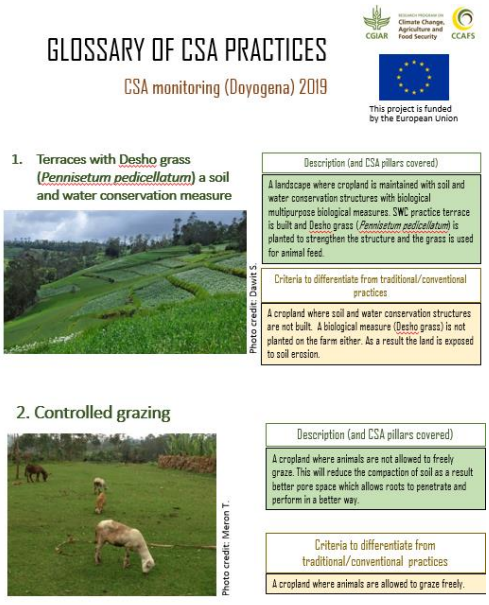
A detailed Glossary with the description of each practice is available in the Annex 2 and the final Doyogena tailored questionnaire upon request.

## CSA Monitoring Training

Between the 28th October and the 1st November 2019, two CCAFS/CIAT researchers Osana Bonilla-Findji, CCAFS Flagship 2, Science Officer (CSA Monitoring Framework designer) and Anton Eitzinger, CIAT Scientist (GeoFarmer App developer) supported by the CCAFS East Africa CSV coordinator, held this one week training workshop in Hosanna (Ethiopia). See **detailed agenda** in Annex 3.


The Introductory presentation *Monitoring outcomes of CSA options in Doyogena Climate Smart village, Ethiopia (2019)* is available online.




### Participants

Ten participants were trained to be able to act as monitoring enumerators and/or supervisor. They belonged to from different organizations: CCAFS **EA team (Dogoyona CSV coordination), CIAT/Addis Ababa, INTER AIDE (key local partners) and Areka Agricultural Research Center (Annex 4).**


### List of funded Trainers

1. Osana Bonilla-Findji, CCAFS Flagship 2, Science Officer (CSA Monitoring Framework designer)
2. Anton Eitzinger, CIAT Scientist (GeoFarmer App developer)

### Flickr Photo album

A flickr album "Doyogena CSV Monitoring Nov. 2019: CCAFS led a monitoring data collection training, part of the EU-IFAD project, in Doyogena climate-smart landscape in Southern Ethiopia in November 2019 "gathers the visual documentation of the Workshop: https://www.flickr.com/photos/cgiarclimate/albums/72157712025629667

## Implementation of the CSA Monitoring framework in Doyogena

Right after the training, from November 2nd- 10th the local team of enumerators guided by the supervisor carried out the field data collection. See activity report" Implementation of the CSA Monitoring framework in Doyogena Climate-Smart Landscape, Ethiopia" available at: https://hdl.handle.net/10568/106308)

## Contact persons

For queries or comments regarding the European funded IFAD Training workshop on 28 October-1st Nov 2019 please contact Osana Bonilla-Findji, Science Officer for CCAFS Flagship 2, at o.bonilla@cgiar.org

For queries or comments regarding the project conducted in East Africa please contact Dawit Solomon, CCAFS Regional Program Leader East Africa, at d.solomon@cgiar.org

## Annex 1. Site Specific tailoring information for Doyogena 2019

**CSV name and country**

| |
|---|
| Doyogena Climate Smar Landscape, Ethiopia |

**Implementation Year:**

| |
|---|
| 2019 |

**1.. List Main Ethnic groups present in the CSV**

| |
|---|
| Kembata |

**2. Sampling period to be covered by the monitoring questions (Select the relevant option)**

| |
|---|
| During the last 12 months |

**3. Specific "Hunger" or most difficult month or period in the year in terms of access to enough Food (for the Food Security Module Questions)**

| |
|---|
| February-March |
| October-November |

**4. List of Most frequent extreme climate events (affecting agricultural production) occuring in the region in the period to be monitored**

| |
|---|
| Heavy rains |
| Irregular rains |
| Storms/strong winds |
| Low temperatures |
| Frost |
| Drought |

**5. CSA Practices been tested in the CSV and targetted by the Monitoring**

| |
|---|
| 1. Soil and water conservation with biological measure (Terrace + Desho grass planted on the terrace) |
| 2. Controlled grazing |
| 3. Improved wheat seeds - Yield, disease resistance- (Hidase, Huluka, Kingbird, Shorma, Ogolcho (early maturing), Kekeba (early maturing) |
| 4. Improved beans seeds- yield (CS20DK, Dosha, Gebelcho) |
| 5. Improved potato seeds- yield, tuber size (Gudene, Jalene, Belete) |
| 6. cereal/potato—legume crop rotation (N fixing & Non N fixing) |
| 7. Residue incorporation for Wheat or Barley |
| 8. Green Manure (N fixing In Time) vetch and/or lupin during off-season (Pilot) |
| 9. Improved breeds for small ruminants |
| 10. Agroforestry fallow (woody perennials and crops) |
| 11. Cut & Carry |

**6. Climate information services available in the CSV in the period to be monitored (confirm)**

| |
|---|
| 3 days weather forecat (through radio) |
| 10 days weather forecast (through agricultural extension) |
| Seasonal Forecast (through agricultural extension) |

**7. List Main Crops in the CSV**

| |
|---|
| A. Wheat |
| B. Barley |
| C. Potato |
| D. Beans |
| E. Enset |
| F. Cabbage/local cabbage |
| G. Beetroot |
| H. Carrot |

**8. List Main Animals raised (productive purpose) in the CSV**

| |
|---|
| A. Sheep |
| B. Cattles |
| C. Poultry |
| D. Honey bees |
| E. Donkey |

**9. List main Trees growned (productive purpose) in the CSV**

| |
|---|
| A. Eucalyptus |
| B. Korch (Erythrina abyssinica) |
| C. Bamboo |

**10. Main units used in the CSV for( select or edit as needed):**

| | |
|---|---|
| Farm area: | Ha |
| Units for crop sold | Quintal (100 kg) |
| Units for animal/livestock sold | Number |
| Unit of organic fertilizers applied | Kg/Ha |
| Units for fertilizers applied | Kg/Ha |
| Units for pesticide applied | L/Ha |

**11. Local Currency**

| |
|---|
| Birr |

**12. CSV Villages names**

| |
|---|
| 1. Tula |
| 2. Suticho |
| 3. Gewada |
| 4. Cholola 2 |
| 5. Tachignaw Genjo |
| 6. Duna |
| 7. Gatame 1 |

# 2019 monitoring in Doyogena (Ethiopia)

## 1. Terraces with Desho grass (*Pennisetum pedicellatum*) a soil and water conservation

Photo credit: Dawit S.

| Description (and CSA pillars covered) |
| --- |
| A landscape where cropland is maintained with soil and water conservation structures with biological multipurpose biological measures. SWC practice terrace is built and Desho grass (*Pennisetum pedicellatum*) is planted to strengthen the structure and the grass is |

| Criteria to differentiate from traditional/conventional practices |
| --- |
| A cropland where soil and water conservation structures are not built. A biological measure (Desho grass) is not planted on the farm either. As a result the land is exposed to soil erosion. |

## 2. Controlled grazing

Photo credit: Meron

| Description (and CSA pillars covered) |
| --- |
| A cropland where animals are not allowed to freely graze. This will reduce the compaction of soil as a result better pore space which allows roots to penetrate and perform in a better way. |

| Criteria to differentiate from traditional/conventional practices |
| --- |
| A cropland where animals are allowed to graze freely. |

## 3. Improved wheat seeds (high yielding, disease resistant & early maturing)

Photo credit: Dawit S.

| Description (and CSA pillars covered) |
| --- |
| This improved wheat seed are high yielding, disease resistant, and early maturing. By using this CSA practice, farmers reduce the risks associated with crop failure and improve food security. It also increases yield as a result income and enhance resilience. The varieties that the farmers are planting are Hidase, Huluka, Kingbird, Shorma, Ogolcho and Kekeba. |
| **Criteria to differentiate from traditional/conventional practices** |
| Traditionally, farmers grow wheat varieties which are less productive, susceptible to pests and taking long maturing period. |

## 4. Improved bean seeds (high yielding)

Photo credit: Gebermedihin A.

| Description (and CSA pillars covered) |
| --- |
| This improved bean seed are high yielding. By using this CSA practice, farmers are able to get higher yield as a result improved income and food security and enhanced their resilience. The varieties that the farmers are planting are CS20DK, Dosha and Gebelcho. |
| **Criteria to differentiate from traditional/conventional practices** |
| Traditionally, farmers grow bean varieties which are less productive. |

## 5. Improved potato seeds (high yielding, bigger tuber size)

Photo credit: Dawit S.

| Description (and CSA pillars covered) |
| --- |
| This improved potato seed are high yielding and have bigger tuber sizes. By using this CSA practice, farmers are able to get higher yield as a result improved income and food security and enhanced their resilience. The varieties that the farmers are planting are Gudene, Jalene and Belete. |
| **Criteria to differentiate from traditional/conventional practices** |
| Traditionally, farmers grow potato varieties which are less productive with smaller tuber size. |

## 6. **Cereal/potato-legume crop rotation (Nitrogen fixing & non-N fixing)**

Photo credit: Dawit S.

| Description (and CSA pillars covered) |
| --- |
| Cereal/potato-legume crop rotation is the practice of growing a series of dissimilar or different types of crops in the same area in sequenced seasons. This CSA practice is done so that the soil of farms is not used for only one set of nutrients. It helps in reducing soil erosion and increases soil fertility and crop yield. |

| Criteria to differentiate from traditional/conventional practices |
| --- |
| Traditionally, farmers grow the same crop or same family crops (e.g. wheat and barely) in sequenced seasons. |

## 7. Residue incorporation of wheat or barley

Photo credit: Meron T.

| Description (and CSA pillars covered) |
| --- |
| Crop residue management is the practice of incorporating crop residue to the soil. This CSA practice provides seasonal soil protection from wind and rain erosion, adds organic matter to the soil, conserves soil moisture, and improves infiltration, aeration and tilth. |

| Criteria to differentiate from traditional/conventional practices |
| --- |
| Traditionally, farmers remove the crop residue from their field or burn it. |

## 8. **Green manure: vetch and/or lupin during off-season (N fixing in time)**

Photo credit: Gebermedihin A.

| Description (and CSA pillars covered) |
| --- |
| Green manuring is a practice where farmers grown nitrogen fixing crops such as vetch and lupin during off-season for the purpose of soil amendment and mulching. |

| Criteria to differentiate from traditional/conventional |
| --- |
| Traditionally, farmers leave their cropland bare. |

## 9. Improved breeds for small ruminants (Sheep)

Photo credit: Gebermedihin A.

| Description (and CSA pillars covered) |
| --- |
| Community Based Breeding program is a technology of choice for genetic improvement of small ruminants; measurable genetic gains in performance traits and impact on livelihoods; ensure food security under a changing climate, providing households with both nutrition and disposable income. Their small body size, flexible feeding habits and short generation intervals make them suited to climate-risk management. Their low investment costs are affordable to subsistence farmers and are often owned and tended by women and youth. |

| Criteria to differentiate from traditional/conventional practices |
| --- |
| Traditionally, farmers use local breeds with less body weight and less ability to produce offspring. As a result, the productivity level is below its genetic potential. In addition, different production constraints and lack of appropriate breeding strategies developed for the breed in the production system contribute to less genetic potential. |

## 10. Agroforestry (woody perennials and crops)

Photo credit: Gebermedihin A.

| Description (and CSA pillars covered) |
| --- |
| This practice is a dynamic, ecologically based natural resource management system through the **integration of trees on farms** and in agricultural landscapes which diversifies and sustains production for increased economic, social and environmental benefits for land users. |

| Criteria to differentiate from traditional/conventional practices |
| --- |
| The main criteria that helps farmers are (i) if intentional (combinations of trees, crops and/or animals are intentionally designed and managed) (ii) if intensive (management wise to maintain their productive and protective functions) (iii) if interactive (biological and physical interactions between the tree, crop and animal components) (iv) if integrated (the tree, crop and/or animal components are structurally and functionally combined into a single integrated management unit) |

## 11. Cut and carry for animal feed

| Description (and CSA pillars covered) |
| --- |
| In this CSA practice farmers produce forage on soil terrace built on their cropland and around their house. In addition to feeding to their livestock, farmers sell the forage to get additional income. |

| Criteria to differentiate from traditional/conventional practices |
| --- |
| Traditionally, farmers don't produce forage on their cropland or around their house As a result, their livestock allowed to free graze. |

## Annex 3: Training Workshop Agenda

| 28/10/2019 | Day 1 |
|---|---|
| 8:30 – 12:30 | Opening and teams introductions<br>• Introduction to CSV work and CSA monitoring plan objectives and design<br>• Review definitions and characteristics of targeted CSA practices<br>• Introduction to the Geofarmer App and Installation in cellphones<br>• Creation of Enumerators' user and subscription be "Sandbox"/ learning channel<br>• Provision of Moderator role- Granting facilitators role in Sandbox channel |
| 14:00 – 17:00 | • Getting familiar with the Registration- Demographic module Questions explanation by Trainers<br>• Practical exercises: Navigation in the Sandbox Channel<br>• Introduction to survey facilitation using Hash-Key (Individual anonymized ID) |
| **29/10/2019** | **Day 2** |
| 8:30 – 17:00 | • Introduction to Survey-Modules M1 to M 4, Questions explanations and practical exercises among trainees |
| **30/10/2019** | **Day 3** |
| 8:30 – 12:30 | • Introduction to Module 5<br>• Practical exercises among facilitators<br>• Feedback discussions and reflections on results<br>• Supervisor (Moderator) results checking from Sandbox Channel |
| 14:00 – 17:00 | • Adjustments/changes incorporated in CSV specific channel<br>• Facilitators unsubscribe from Sandbox<br>• Facilitators Subscribe to CSV specific Channel (preparation for field "dummy"data collection)<br>• Moderator 'accepts' user and grants Facilitator role |
| **31/10/2019** | **Day 4- Field testing** |
| 8:30 – 16:00 | • Field testing in Communities 1 and 2 with dummy farmers using the specific CSV channel<br>• Look at results, feedback session at the end of the day<br>• Moderator clears responses (only if from dummy farmers) |
| 17:30 – 18:30 | Trainers meeting with local partners and Supervisor (confirmation of communities sampling plans and enumerators distributions) |
| **01/10/2019** | **Day 5 – Field work** |
| 8:30 – 16:00 | Field work: Start surveys with real farmers |
| 17:00 – 18:00 | • Data synchonization and checking<br>• De-briefing |

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## Climate Smart Villages Monitoring – Doyogena (Ethiopia)

### October 28th – November 1st, 2019

| No/ FACI | Name | Title/background | Institution | Email | Phone | Signature |
|---|---|---|---|---|---|---|
| 1 | Esayas Petros | Field technician / BSc Animal and rangeland | Inter Aide | esayasp1@gmail.com | +251 913 150742 | |
| 2 | Gizachew Mirkano | Field technician / BSc Natural resource management | Inter Aide | gmirkano@gmail.com | +251 994 790929 | |
| 3 | Mesele Gintamo | Field technician / BSc Agricultural economics | Inter Aide | Meseleg56@gmail.com | +251 926 345615 | |
| 4 | Tesfaye Abiso | Fishery researcher (MSc) | Areka Agricultural Research Center | tesfayeab2011@yahoo.com | +251 916 832950 | |
| 5 | Zekariyas Basa | Agricultural economist researcher (MSc) | Areka Agricultural Research Center | aldadakajela@gmail.com | +251 913 918474 | |
| 6 | Endriyas Dako | Food science and post-harvest researcher (MSc) | Areka Agricultural Research Center | endriasd@yahoo.com | +251 913 225030 | |
| 7 | Estifanos Endriyas | Animal nutrition junior researcher (BSc) | Areka Agricultural Research Center | estifanosmessi10@gmail.com | +251 925 107704 | |
| 8 | Abreham Belay | Ph.D. candidate (Hawassa University) | Areka Agricultural Research Center | abrish.z2010@gmail.com | +251 910 275930 | |
| 9 | Meron Tadesse | CSA research consultant (MA) | CIAT | merrytade@gmail.com | +251 977 946145 | |
| 10 | Gebermedihin Ambaw | Research Associate (MSc) | CCAFS EA | g.ambaw@cgiar.org | +251 913 173340 | |

## Annex 5. Terms of Reference Trainers

| | |
|---|---|
| Name | **Osana Bonilla-Findji** |
| Role | Leading all preparation work for the CSA Monitoring framework to be tailored to Doyogena and design for field implementation.<br>Workshop Trainer in her quality of Science Officer, Climate-Smart Agricultural Practices and conceptual designer of the CSA monitoring framework. |
| Organization (public/private) | CCAFS Flagship 2/ CIAT |
| Dates of travel | Arrival Oct 25 2019 – November 2d 2019 |
| Details | None |

| | |
|---|---|
| Name | **Anton Eitzinger** |
| Role | Trainer, expert on the Geofarmer Application development for data collection |
| Organization (public/private) | CIAT |
| Dates of travel | Arrival Oct 25 2019 – November 1st 2019 |
| Details | None |

## Annex 6. Terms of Reference Training Workshop

RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CGIAR CCAFS

This project is funded by the European Union

# Terms of Reference

## *European Funded IFAD Training workshop: Implementation of the CSA Monitoring: Assessing adoption of Climate Smart Agricultural (CSA) options and related outcomes in Doyogena Climate-Smart village (Ethiopia)*

Hosanna, Ethiopia, 28 October- November 1st 2019

| | |
|---|---|
| Grant number | 2000002575 |
| Project title | Building Livelihoods and Resilience to Climate Change in East and West Africa: Agricultural Research for Development (AR4D) for large-scale implementation of Climate-Smart Agriculture' |
| Agreement | G158 |

### Background

Led by the International Center for Tropical Agriculture (CIAT), the Climate Change, Agriculture and Food Security (CCAFS) Program is a collaboration among all 15 CGIAR Research Centers. It brings together some of the world's best researchers in agricultural science, climate science, environmental and social sciences to identify and address the most important interactions, synergies and trade-offs between climate change and agriculture. CCAFS aims to define and implement a uniquely innovative and transformative research program to help vulnerable rural communities adjust to global changes in climate and overcome the threats posed to agriculture and food security. Fully aligned with this global CCAFS effort CIAT together with ICRAF, ICRISAT and ILRI are implementing the EU-IFAD funded project "Building livelihoods and resilience to climate change in East & West Africa".

The projects' overall goal will be achieved through supporting large-scale adoption of climate-smart agricultural technologies and practices.To address the challenge of how to transit to CSA at scale, CCAFS Flagship 2 will work with partners to test, evaluate, promote and scale up CSA technologies and practices that meet the needs of farmers – including women and marginalized groups.

The project has two main objectives:

(i) to derive new knowledge on scalable CSA technologies and institutional options with demonstrable benefits to women and men farmers, youth employment, climate resilience and low emissions development; and

(ii) to engage in on-going development and private sector initiatives to assist in prioritisation of best bet options and in policy development.

## Rationale

The current activity to be implemented by CCAFS Flagship 2 will contribute to the project Output 1: "Five technological or institutional CSA options that can be scaled up with smallholder farmers in Ethiopia" which includes:

- the identification of CSA options for the rehabilitation of degraded landscapes and ecosystems, and the enhancement of farmer resilience; and
- the assessment of CSA options in the climate-smart villages (CSV).

## Objectives

### Main objective

To carry out a technical training workshop to build the capacities of the local team and key partners involved in the fieldwork in the Doyogena Climate-Smart Landscape to implement the annual CSA monitoring framework in 2019 and onwards over the project timeline.

### Specific objectives

1. To tailor the CSA Monitoring framework and ICT-based data collection tool (Gepfarmer) developed by CCAFS FP2 to the Doyogena context-specific conditions and identify the key CSA options promoted in the site to support the rehabilitation of degraded landscapes and ecosystems, and the enhancement of farmer resilience, and which shall be tracked with the Monitoring.

2. Specifically build the capacity of a Supervisor (future trainer of trainers) to technically be able to annually manage/adjust the monitoring App and lead the local implementation of the Monitoring framework.

3. Support the local team (enumerators and supervisors) in the first days of field data collection in Doyogena and ensuring a smooth transition to full implementation.

## Target audience

CCAFS EA, Dogoyona CSV coordinator, key local partners (namely INTER AIDE, Areka Agricultural Research Center, CIAT and enumerators.

## Expected outputs

- ✓ **Glossary of key CSA options** to support the rehabilitation of degraded landscapes and ecosystems identified (Document)
- ✓ **CSA monitoring App and questionnaire tailored to Doyogena CSV site (Ethiopia)** and ready for implementation
- ✓ **CSA monitoring training** delivered in Doyogena (ppt presentation and Photos)
- ✓ **Workshop participants list:** CCAFS EA, local partners and enumerators trained and ready to start implementation (to be led by CCAFS EA/ILRI team)

## Timeline

Activity and outputs shall be delivered before December 20, 2019

## Estimated budget (trainers attendance)

| Description | USD |
|---|---|
| Flights | 2300 |
| Visa | 65 |
| Accommodation | 480 |
| Per diem | 660 |
| Transportation | 20 |
| | |
| **Total** | **3,525** |

Note: A budget-transfer of USD 9,000 from the travel budget from CCAFS F2 unit (G158FL16 TV1) to the CCAFS EA unit budget (G158CG22, Contract C-080-19 ILRI) has been requested and is currently pending

## List of funded Trainers

1. Osana Bonilla-Findji, CCAFS Flagship 2, Science Officer (CSA Monitoring Framework designer)
2. Anton Eitzinger, CIAT Scientist (GeoFarmer App developer)

## Contact persons

For queries or comments regarding the European funded IFAD Training workshop on 28 October-1st Nov 2019 please contact Osana Bonilla-Findji, Science Officer for CCAFS Flagship 2, at o.bonilla@cgiar.org

For queries or comments regarding the project conducted in East Africa please contact Dawit Solomon, CCAFS Regional Program Leader East Africa, at d.solomon@cgiar.org

## Draft agenda

| 28/10/2019 | Day 1 |
|---|---|
| 8:30 – 12:30 | Opening and teams introductions<br>• Introduction to CSV work and CSA monitoring plan objectives and design<br>• Review definitions and characteristics of targeted CSA practices<br>• Introduction to the Geofarmer App and Installation in cellphones<br>• Creation of Enumerators' user and subscription be "Sandbox"/ learning channel<br>• Provision of Moderator role- Granting facilitators role in Sandbox channel |
| 14:00 – 17:00 | • Getting familiar with the Registration- Demographic module<br>Questions explanation by Trainers<br>• Practical exercises: Navigation in the Sandbox Channel<br>• Introduction to survey facilitation using Hash-Key (Individual anonymized ID) |

| 29/10/2019 | Day 2 |
|---|---|
| 8:30 – 17:00 | • Introduction to Survey-Modules M1 to M 4, Questions explanations and practical exercises among trainees |
| **30/10/2019** | **Day 3** |
| 8:30 – 12:30 | • Introduction to Module 5<br>• Practical exercises among facilitators<br>• Feedback discussions and reflections on results<br>• Supervisor (Moderator) results checking from Sandbox Channel |
| 14:00 – 17:00 | • Adjustments/changes incorporated in CSV specific channel<br>• Facilitators unsubscribe from Sandbox<br>• Facilitators Subscribe to CSV specific Channel (preparation for field "dummy"data collection)<br>• Moderator 'accepts' user and grants Facilitator role |
| **31/10/2019** | **Day 4- Field testing** |
| 8:30 – 16:00 | • Field testing in Communities 1 and 2 with dummy farmers using the specific CSV channel<br>• Look at results, feedback session at the end of the day<br>• Moderator clears responses (only if from dummy farmers) |
| 17:30 – 18:30 | Trainers meeting with local partners and Supervisor (confirmation of communities sampling plans and enumerators distributions) |
| **01/10/2019** | **Day 5 – Field work** |
| 8:30 – 16:00 | Field work: Start surveys with real farmers |
| 17:00 – 18:00 | • Data synchonization and checking<br>• De-briefing |