



RESEARCH PROGRAM ON
**Climate Change,
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TRANSFORMING LIVES AND LANDSCAPES



CSIR-SAVANNA AGRICULTURAL RESEARCH INSTITUTE (CSIR-SARI), GHANA

**Supervisory Report on CSV Monitoring Plan in the Lawra-Jirapa Climate-Smart Villages,
Ghana**



**Submitted to
CCAFS/ICRAF/CIAT**

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TABLE OF CONTENT

RESEARCH TEAM	3
LIST OF TABLES	5
LIST OF FIGURES	6
ACRONYMNS AND ABBREVIATIONS	7
ACKNOWLEDGEMENT	8
1. Background.....	9
2. Objectives of the study.....	9
3. Approach.....	9
4. Outcomes of survey.....	10
a. Average Time to Complete a Survey.....	17
b. Average number of questionnaire per enumerator per day.....	18
c. Enumerators' Feedback and Comments.....	18
d. Farmers' reactions to the questions and monitoring exercise.....	18
e. Ideal Time for the Implementation of the Monitoring Survey.....	19
f. Photos of Enumerators.....	19
g. CSA technologies or practices implemented in 2017 at Doggoh and Bompari....	19

List of Tables

Table 1: total number of farmers interviewed.....	10
Table 2: Average time spent on administering a questionnaire.....	17
Table 3: average number of questionnaires completed in a day.....	18
Table 4: CSA technologies and practices implemented in 2017.....	19

List of Figures

Figure 1: Tied ridges technology.....	20
Figure 2: Earth bunding.....	20
Figure 3: Crop rotation between maize and cowpea.....	21

Acronyms and Abbreviations

CSA	Climate-Smart Agriculture
CCAFS	Climate Change Agriculture and Food Security
CSV	Climate-Smart Village
CIAT	International Center for Tropical Agriculture
NCSV	Non Climate-Smart Village
ICRAF	International Centre for Research in Agroforestry

ACKNOWLEDGEMENT

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RESEARCH TEAM

The Savanna Agricultural Research Institute of the Council for Scientific and Industrial Research (CSIR-SARI) served as the host institution for the pilot survey of the CSV Monitoring Plan of the CCAFS project in the Upper West Region of Ghana. The implementation of the project was carried out by the collaborative effort of the following research scientists and staff from CCAFS CIAT, ICRISAT and SARI:

Name	Portfolio in CCAFS Team	Responsibility in M&E survey
Dr. Samuel Saaka Buah	CCAFS Team Leader	Coordinator
Anslem B. Nyuor	M&E Focal Person	Supervisor
Hashim Ibrahim	Team member	Enumerator
Mavis Derigubah	CCAFS Gender Disk Officer	Enumerator
Assibi T. Bawa	CCAFS Field officer, Bompari	Enumerator
Peter Maalongae	CCAFS Field officer, Doggoh	Enumerator
David Beni	Field assistance	Enumerator
Stephen Dari	CSIR-SARI staff	Enumerator
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1. Background

The purpose of the study was to pilot the implementation of an M&E monitoring Plan that would allow future monitoring to track progress of CSA adaptation options currently being implemented in the Lawra and Jirapa Climate-Smart Village site comprising seven communities of these districts located in the Upper West region of Ghana.

2. Objectives of the study

The study sought to assess four specific objectives as follows;

1. Assess the CSA performance at farm level.
2. Assess changes in household food, livelihood security, adaptation indicators. (adopters/non-adopters) to assess potential effects of the CSA practices
3. Assess CSA adoption and dissemination within those communities.

Objectives 2 and 3 were examined using the Smart Monitoring Application developed by CCAFS which covers six thematic areas or modules: Demographic baseline, Climate shocks, Climate services, Livelihood security and financial services, Food security and Climate-smart options.

3. Approach

The implementation of the piloting of the CSV Monitoring Plan was conducted between September and October, 2017 at the CCAFS villages in Ghana.

The first 2 days basically focused on sharing the Monitoring system developed with the CCAFS team in Ghana together with a team of six enumerators. Specific scope and objectives of the CSV monitoring and the data collection tool was introduced to the enumerators where all the Modules & questions were discussed to ensure enumerators understand the critical issues of the M&E and which indicator is associated to each of them and can properly translate for the farmers.

A pre-testing was conducted at the two CSVs of Doggoh and Bompari to identify issues that needed to be streamlined for adjustment before the actual start of the survey. Data collection was done with the use of Tablets where daily interviews were synchronized after each day's work into a central database system developed by the CCAFS/CIAT monitoring team.

The sampling period which lasted 11 days, covered a total of 190 households: 140 Households from the baseline conducted in 2011 and an additional group of direct CCAFS beneficiaries (50 additional households in 2 of the villages). This was to ensure that at the end we have a similar number of farmer's interviews that are adopting and those not adopting for the purpose of comparison. The dataset includes household heads and their spouses and the youth contributing to agricultural production at the farm level.

4. Outcomes of survey

Table 1 presents the number of respondents interviewed at the CCAFS site comprising seven (7) communities namely, Baazu, Bompari, Doggoh, Jeffiri, Kulkani, Orbili and Tuori in Ghana.

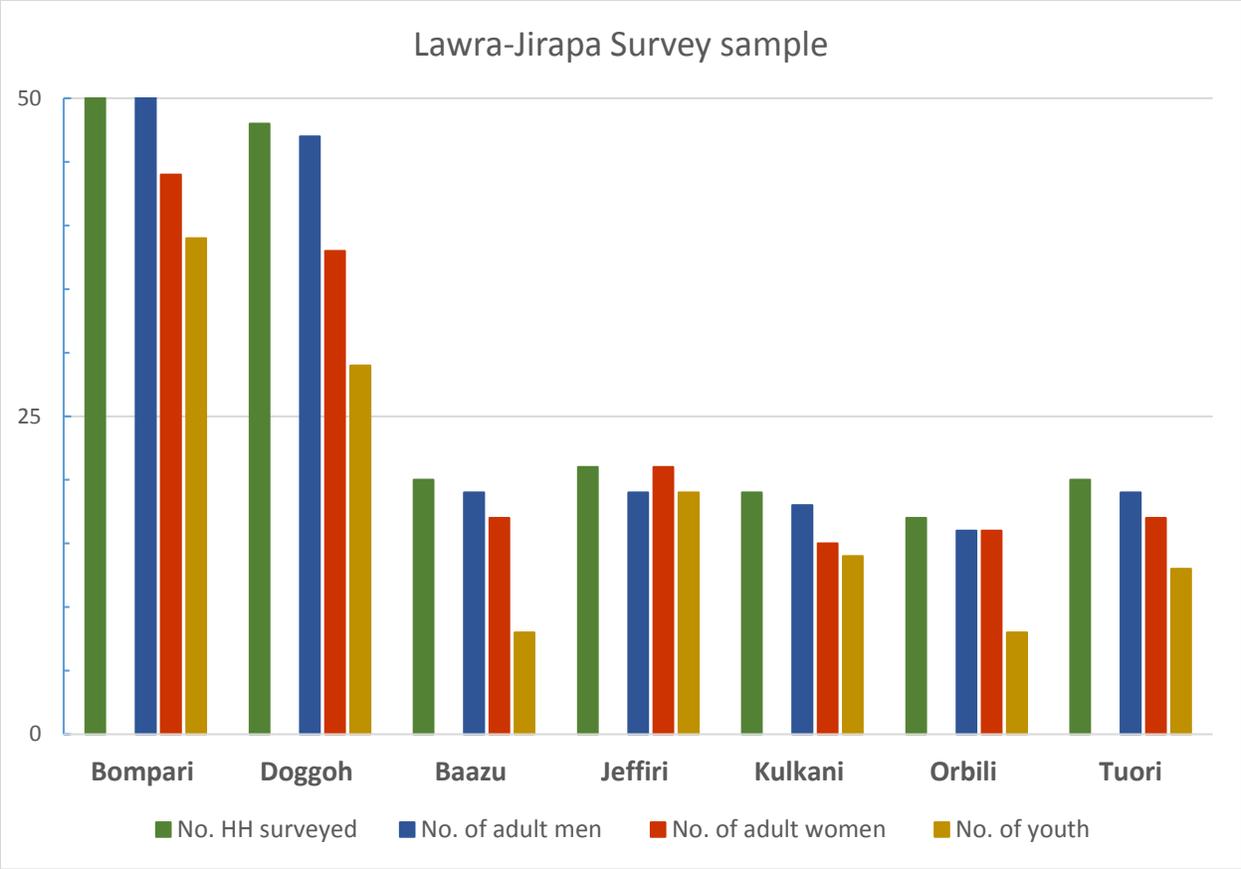
The baseline survey conducted in 2011 covered 140 households. The recent piloting of the Monitoring plan went beyond the original respondents in the baseline which involved only household heads to include other adult females and youth within the household setting who contribute to agricultural production. Besides the initial 140 households from the CCAFS baseline study, additional farmers that were not included in this 2011 exercise but who are **currently involved in the implementation of CSA technologies and practices in the two CSVs** (Bompari and Doggoh) and the other five communities were included. In order to ensure that all identified households were covered, checks on synchronized data were done.

Table 1 shows were initial checks on households interviewed and the rest identified to establish their status in terms of their availability for the interview. Follow ups were made in which some of them were interviewed. Others in Baazu, Kulkani, Tuori and Orbili could not be interviewed because they either traveled, refusal to take part or died.

After some cleaning of duplicates in the sample, a total of 358 respondents were confirmed and authenticated has been interviewed.

Table 1: total number of households and farmers interviewed

Community	Number of HH surveyed	Number of farmers	Number of adult men surveyed	Number of adult women surveyed	Number of youth surveyed
Baazu	20	36	19	17	8
Bompari	50	95	51	44	39
Doggoh	48	85	47	38	29
Jeffiri	21	40	19	21	19
Kulkani	19	33	18	15	14
Orbili	17	32	16	16	8
Tuori	20	36	19	17	13
TOTAL	195	357	189	168	130



a. Average Time to Complete a Survey

For the purpose of future planning of the CSV monitoring survey, individual enumerators were asked to account for the time taken to complete a survey based on whether the respondent was an adult or youth and also if the adult was from a CSV or Non-CSV. The differences in timing of the various categories of respondent was a result of the fact that farmers or respondent implementing CSA technologies and practices are more likely to take longer time to finish responding to a survey compared non-implementing farmers/respondents.

The result of this exercise indicates that **an average maximum of 50 minutes** was spent on an adult respondent implementing CSA technologies and practices. The **average minimum time required was 39 minutes**. When a third person belonging to the category “Youth” and **contributing to the implementation** of CSA technologies and practices was surveyed, only the Module “CSA Practices” was addressed. In these cases, the average time taken to complete this partial survey was between 25-29 minutes.

The average maximum and minimum time taken for a **non-implementing adult** to complete a survey was **34 and 24 minutes** respectively. When a third, non-implementing person belonging to the category “Youth” was surveyed, the time taken was **18-23 minutes** (See Table 2)

Table 2: Average time spent on administering a questionnaire

Parameter/Enumerator	Max. time adults CSV	Min. time adults CSV	Max. time youths CSV	Min. time youth CSV	Max. time adults NCSV	Min. time adults NCSV	Max. time youths NCSV	Min. time youth NCSV
Hashim I.	50	35	20	15	45	30	20	15
Mavis D.	50	37	30	25	40	29	22	20
Peter M	55	42	34	30	35	25	26	21
David B	50	40	35	32	30	20	27	19
Assibi B	45	40	25	20	25	20	20	15
Stephen D	47	38	30	25	30	22	21	18
Av. Max (CSV)	49.50							
Av. Min (CSV)		38.67						
Max. youth CSV			29.00					
Av. Min (CSV)				24.50				
Av. Max (NCSV)					34.17			
Av. Min (NCSV)						24.33		
Max. youth (NCSV)							22.67	
Av. Min (NCSV)								18.00

b. Average Number of Questionnaire per Enumerator per Day

A total of **six enumerators** were used to collect the survey data using Tablets. The number of a set of questionnaires (adult, spouse and youth) completed per day by an enumerator varied from one enumerator to the other based on the individual ability to effectively use the Tablet and also the understanding of the question posed to the respondent.

Three (3) of the enumerators representing 50% were able to complete a set of **five (5) questionnaires comprising adult, spouse and youth in a day**. Another 50% of the enumerators were also able to complete a set of **four (4) questionnaires per day** (See Table 3).

Table 3: average number of questionnaires completed in a day

Enumerator	Average number of set 3 persons
Hashim Ibrahim	4
Mavis Derigubah.	5
Peter Maalongae	5
David Beni	4
Assibi T Bawa	5
Stephen Dari	4

c. Enumerators' Feedback and Comments

From the perspectives of some enumerators' responses to some multiple choice questions were limited by a few options. In their view some vital information that needed to be captured were omitted. Other issue raised was that the timing of the survey which they indicated was not convenient. They indicated that it was extremely difficult in some instances to get respondents because of the harvesting they were doing during the survey. In most cases enumerators have to trace farmers to their farms in order to interview them. Questionnaires were well understood by enumerators.

With respect to the Tablets, it **took much longer time to complete a survey in the first two days because they were still not familiar with the questionnaire.** However, it became easy to handle and use in the subsequent days as they got familiar with the questionnaire.

d. Farmers' Reactions to the Questions and Monitoring Exercise

The major concern raised by farmers was **timing of the survey.** To them the timing was not convenient because the survey coincided with the harvesting period. **Some farmers complained that the time taken to complete a survey was rather too long.** Other farmers saw the survey as an **opportunity to express their feelings** (expectations and frustrations) about the CCAFS project they are going through as far as the implementation of the project activities are concerned. Despite the challenges farmers however expressed their appreciation to CCAFS because of the impact it has on their production system currently. **They reported that their food security issue has improved due to increase in yield of major staple crops such as maize and sorghum. Their income levels have also improved due to the use of good agronomic practices such as row planting, composting and residue retention.**

e. Ideal Time for the Implementation of the Monitoring Survey

Generally, reports from enumerators as well as farmers indicated that the timing of the survey was not appropriate largely because it came at a time harvesting of farming activities were going on. From the enumerators point of view if future surveys could be organized at a time that farmers have finish their farming activities. Precisely they suggested that it could **come before or after harvesting.** Before harvesting would be in **August** and after would be **either between April and May or January and February.**

f. Photos of Enumerators

Photos of enumerators can be retrieved from the tablets sent to ICRAF.

g. CSA Technologies or Practices Implemented in 2017 at Doggoh and Bompari

Under the 2016/2017 cropping season, the CCAFS project implemented a number of technologies and practices in the two CSVs of Doggoh and Bompari in the Jirapa and Lawra districts respectively.

The most widely adopted technologies or practices were **tied ridges, crop rotation** (between maize and cowpea), **earth bunding** and **soybean production** as nutrition enhancing strategy. Crop planted under tied ridges and earth bunding was all maize. **Soybean is being promoted in the two CSVs particularly among women to enhance the nutritional status** of the household. At Doggoh groups of (15, 10 and 6) women produced soybean covering a total area of 1.50 acres, while a group of 13 women at Bompari also cultivated half acre soybean area. **The idea is to guide women on agronomic practices of the soy crop so they can go large scale on their own farms in the future.**

Table 4 presented only farmers who are testing some combination of agronomic technologies and practices. However, adoption of these technologies and practices are wide spread across and beyond the CSVs through social learning framework that exist in the area.

Table 4: CSA technologies and practices implemented in 2017

Technology/practices	Doggoh				Bompari			
	No. of male farmers	No. of female farmers	Total no. of farmers	Total Area	No. of male farmers	No. of female farmers	Total no. of farmers	Total Area
Tie Ridges	7	3	10	4.20	3	3	6	2.52
Crop Rotation	1	8	9	3.74	5	0	5	2.08
Earth Bunding	0	0	0	0.00	5	1	6	2.52
Soybean	0	31	31	1.50	0	13	13	0.50

Figure 1, 2 and 3 below present photographs of tied ridges, earth bunding and crop rotation respectively.



Figure 1: Tied ridges technology



Figure 2: Earth bunding



Figure 3: Crop rotation between maize and cowpea