# **Climate Smart Agriculture Rapid Appraisal** (CSA-RA): A Prioritization Tool for Outscaling



# **Step-by-Step Guidelines**

C. Mwongera, J. Twyman, K.M. Shikuku, L. Winowiecki, W. Okolo, P. Laderach, E. Ampaire, P. Van Asten and S. Twomlow



Investing in rural people



RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security



# Climate Smart Agriculture Rapid Appraisal (CSA-RA): A Prioritization Tool for Outscaling Step-by-Step Guidelines

This Climate Smart Agriculture Rapid Appraisal (CSA-RA) was produced as part of the CIAT-led, IFAD-funded Project: "Increasing food security and farming system resilience in East Africa through wide-scale adoption of climatesmart agricultural practices"

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C. Mwongera<sup>A</sup>, J. Twyman<sup>B</sup>, K.M. Shikuku<sup>AC</sup>, L. Winowiecki<sup>A</sup>, W. Okolo<sup>A</sup>, P. Laderach<sup>B</sup>, E. Ampaire<sup>D</sup>, P. Van Asten<sup>D</sup> and S. Twomlow<sup>E</sup>

<sup>A</sup>= International Center for Tropical Agriculture (CIAT), Nairobi, Kenya

<sup>B</sup>= International Center for Tropical Agriculture (CIAT), Cali, Colombia

<sup>C</sup>= Wageningen University, Netherlands

<sup>D</sup>= International Institute of Tropical Agriculture, Kampala, Uganda

<sup>E</sup>= International Fund for Agricultural Development

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# **Objectives of the Climate Smart Agriculture Rapid Appraisal (CSA-RA)**

The CSA-RA provides an assessment of key barriers and opportunities to CSA adoption across landscapes by collecting gender-disaggregated data, perceptions of climate variability, resource and labour allocation, as well as economic assessments at the household level. This approach combines participatory workshops, expert interviews, household/farmer interviews, and farm transect walks to gather and capture the realities and challenges facing diverse farming communities.

This manual outlines step-by-step approaches to:

- I. Obtain a preliminary understanding of the farming systems, household characteristics, infrastructure, land tenure, household expenditure, asset ownership, profitability of the farming enterprises, and other important agriculture-related features.
- II. Identify farmers' perceptions of weather patterns (e.g., climate variability) and its perceived impact on agricultural production.
- III. Obtain a preliminary understanding of major challenges and constraints faced by farmers (i.e., climate variability, land health, specific cropping and/or livestock issues, markets, etc.).
- IV. Identify existing and potential CSA practices, agronomic, and land management practices as well as assessing demonstration plots of these practices.
- V. Identify opportunities for mainstreaming CSA and potential social, economic and/or institutional barriers to adoption.
- VI. Identify gender dynamics related to objectives I-V.

# I. Preparing for the CSA-RA

# **1. Site Selection**

The CSA-RA is implemented at a district level or other administrative unit of interest. Within the district, wards and villages are selected based on the following criteria:

- 1. To capture variability of climate and topography, this should represent variability in farming systems.
- 2. To capture the socio-economic variability.

# 2. Establish contact with local authorities

Before going to the field the team needs to establish contact and obtain authorization from the relevant government authorities to work at the sites and conduct interviews. In addition notify the local authorities on the CSA-RA activities and purpose.

# 3. Contact key informants and schedule meetings

To save on time, identify as many key informants as possible and schedule the meetings before arriving at the site. Key informant interviews will be conducted with those knowledgeable about agriculture and/or climate in the region. This includes agriculture and livestock officials, district-level, ward-level, and village-level authorities, local NGOs and farmer associations.

### 4. Participants for the Farmers Workshop

Within the district invite participants for the workshops from different villages within the wards to get perspectives from different parts of the area. 30-40 farmers are invited with efforts made to ensure that the sampled participants include youthful farmers (in this case below 30 years of age) and there is equal representation of gender.

#### 5. Space & Time

The workshop should be held at a centrally located place that both men and women feel comfortable attending. The place should have sufficient room for all participants and the CSA-RA team—should be able to accommodate 6 break-out groups and 50 people comfortably.

The time should be suitable for both male and female participants (market days, funeral days, celebration days, and other days that are not suitable for the local situation will be avoided).

# 6. Tools required for the CSA-RA workshops

- 1. Flip charts
- 2. Markers (many colors and enough for each group to have several)
- 3. Prepared charts & papers (see specific activity needs below)
- 4. Pencils, pens, notebooks, prepared matrices for filling out/note-taking
- 5. Tape
- 6. Digital cameras
- 7. Name tags

### 7. Introductions to the administrative authorities

Upon arrival in the site, introduce the team and the project to the relevant authorities, discuss the planned activities and confirm that the logistics for each activity are settled.

### 8. Training of Enumerators for the CSA-RA

Ideally the CSA-RA team would consist of 6 enumerators/facilitators who have experience with field visits and holding workshops. Where possible recruit an equal number of male and female enumerators—ideally female enumerators will lead the women's group work.

Enumerators will need adequate training in order to collect the needed data. About a week before meeting the team for training the manual is sent to them so that they can study and prepare questions. Two days are required for training to go over the manual, address any questions or concerns. The third day is reserved for the team to pre-test the tool and this should include doing the workshop activities and filling in the questionnaire/matrix in a similar community but different from that to be visited for the CSA-RA.

It is important to make sure all enumerators understand how the workshops will be conducted, practice effective facilitation skills in an experiential learning process and practice all the activities.

# **II. Farmer Workshop**

The farmers' workshop lasts approximately 5 hours. The following activities will be conducted.

# 1. Registration

On arrival at the workshop, registration of farmers will include age, sex, level of education, village and contact information.

# 2. Introductions (20 minutes)

- 1. Introduction of participants- name, village where they are coming from
- 2. Introduce project, why we are here, who we are
- 3. Present the workshop Agenda, time of finishing workshop, how to participate
- 4. Read and sign the Informed Consent also obtain consent to take photos
- 5. Clarify expectations
- 6. (Other preliminaries as appropriate in community)

# 3. Listing Crops and their Uses (30 minutes)

For this activity, 1 facilitator, 1 note-taker on flipcharts using local language, and 2 note-takers on notebook in English are required. Other needed supplies include: markers, tape, blue and red papers to be handed out to the participants.

#### **Purpose:**

The purposes of this activity are 1) to gather information about all the different crops grown in the region, 2) to understand some of the norms related to gender, 3) to understand the primary uses of the crops grown—whether for auto-consumption, selling/market, both, or something else; and 4) to identify the most important crops and common varieties.

#### **Process:**

- 1. Group names all crops and livestock grown/raised within their village—depending on group dynamics these can be shouted out, or we can go around in a circle, or facilitator can call on people. Facilitator should manage group dynamics.
- 2. Gender perceptions—Ask group to hold up blue paper if they think of men first when each crop is mentioned and red paper if they think of women (no discussing—just which comes to mind first—reassure them that we will discuss this at the end) (Figure 1).
  - a. Facilitator reads each crop name, the group quickly raises red or blue paper, facilitator counts and records numbers.
  - b. After classifying all crops, there is a brief discussion of why they thought of men or women (i.e. in one place women did not plant trees so fruit grown in trees was typically listed as a male crop). This discussion should be well documented since it gives a lot of information about gender roles and relationships within the site.
- 3. Next each crop listed is classified as primarily for auto-consumption, for selling, or equally for both (this should be done fairly quickly but if there is discussion the main messages should be acknowledged and noted).
- 4. Ask them to list the 5 most important crops and discuss the reason why.
- 5. Also ask about the most common varieties—Is it a local variety or improved? Also, note the name. If there is no consensus about the most common, write "multiple".

# 4. Listing livestock and their uses (30 minutes)

Repeat steps 1-4 above for livestock and also ask about the most common livestock breeds – Is it local or improved?



Figure 1: Crop-gender association exercise.

# 5. Community/Village Resource mapping (40 mins)

This has been adapted from (Sanginga and Chitsike, 2005).

#### **Purpose:**

The group will draw a resource map showing all the major features of the village including settlements, social infrastructure such as schools, churches, health centers, markets, water points, forests, etc. (Figure 2).

#### **Process:**

- Explain what should be represented on the map (village boundaries, social infrastructures, crops, livestock, households, water points, paths, etc).
- It may be easier to start with the community or village boundaries then major infrastructure.
- Ensure that the "symbols of power" (markers) during diagramming are handed over to those that are not inclined to participate.
- Ensure that someone is taking notes on the various discussions that occur around the mapping exercise.
- Beware of those who dominate the process, and those who remain on the margin. Make effective use of your facilitation skills to encourage participation.
- Remember you are a facilitator not a passive observer; use prompting questions when people appear at loss as what to do next. Interview the map: What is represented? Ask probing questions to explore details omitted.
  - Before starting the activity display a chart showing the different symbols to be used. Clarify if these are the appropriate symbols. Change and/or add missing symbols to the chart. Ensure that this chart is visible to the group to refer to during the drawing.
  - Be sure that the farmers include direction indicators on the map (North, south, east and west) and that the village borders are clearly marked.
  - At the end of mapping/diagramming, review the map by asking farmers/groups to display, present and explain their map in plenary where other farmers can ask questions, make comments or give additional information.

Other needed supplies include: markers, tape, sheets for drawing the map, chart displaying symbols to be used

After this activity, we will break into 6 smaller farmer groups (3 male and 3 female groups) to conduct activities 6-8 described below. These activities take place concurrently. The groups should have a good representation of age classes present as well as villages. If there are any key informants present, they will proceed for the key informant interviews separately.



Figure 2: Resource mapping exercise.

Take a break to offer light refreshments or offer them during the small group discussions

# 6. Group 1: Cropping Calendars (1 hour)

This activity will be done in two groups; one group of men and one group of women. It has been adapted from (Ortega et al 2013) (Figure 3).

### Purpose

This activity allows us to understand the cropping seasons in the site in a normal year, common activities associated with agricultural production, and who performs those activities.

### Process

- First, have each group choose the 5 most important crops. Then explain that we will now make a calendar that shows the seasons and common agricultural activities.
- Agree on which month to start with (current month, beginning of the cropping season, or beginning of the year, whichever farmers find easy to start with). The months of the year could form the columns.
- With the crops in rows and months in columns, you will have a matrix.
  - Add the key activities for production and post-harvest handling to the calendar for the chosen crop.
  - Finally, have them add symbols representing who mainly does the activity (is primarily the male, the female, the couple, the children, the whole family. But, stress that we understand everyone often participates but we are interested in who does most of it. Be sure to note any discussion around this issue.)
  - Ask the group to identify periods of vulnerability (hunger or period of food or income scarcity, etc.
    - i) Which are the months when most households do not have enough food to meet the family's dietary needs? How do they cope during these situations?

Needed supplies include: notebook, pen, markers, tape, symbols to represent who does the activity (man, woman, man & woman, girls, boys, man& boy, woman & girl, whole family).



### Figure 3: Cropping calendar.

# 7. Group 2: Climate /Historical calendars (1 hour)

# a) Climate Calendar

This activity will be done in two groups; one group of men and one group of women.

This activity allows us to understand typical weather patterns. Furthermore, we also ask about years with abnormal weather patterns (i.e. drought and/or flooding) and how that impacts agricultural production (Figure 4).

• Set-up: Tape up or lay out long paper

#### Normal Year

- Ask participants, when does the year start? Add first month (can be January or another month if they start with land preparation or planting that begins in another month). Add months near top of paper.
- Ask participants to add blue papers to the calendar to indicate the rainy seasons and how long they last.
- Ask participants to red papers to the calendar to indicate the dry season and how long they last.
- Then ask for common weather events (strong winds, hail, floods, etc) and when they typically occur. Add these papers/pictures to the calendar.

#### Wet year

- Ask participants to think of year that there was a lot of rain—maybe flooding. What year was it? Note the year and then repeat the exercise (steps 2 4 above). Then briefly discuss how the extra rains influenced farming activities. Guiding questions:
- Which crops (and varieties) and animals were most affected in this year by the extra rain? How were they affected? What happened? How did farmers react?
  - i) How were men and women affected?
  - ii) How did men and women react?

- Which crops and varieties were least affected? Why?
- Which farmers were most/least affected? Why? How did they respond?
- Did the excess rain in the season affect the next growing season? How? Why?

#### Dry year

Repeat the exercise with an extremely dry year. Be sure to note the year the farmers refer to. Repeat the discussion questions.

- What are the households/community coping strategies during the dry year How and where do they obtain food?
- If time allows, continue the conversation by asking more weather-related questions:
  - We have examined two types of weather events (rainy and dry), what other weather events most affect farmers? How does it affect them? How do they respond?
  - Overall have farming practices changed in the last 5 10 years because of changes in the weather? If yes, how and in response to what weather changes?
  - Have other factors caused major changes in farming practices? What has changed and why?

Needed supplies include: markers, tape, red and blue strips of paper, notebook and pen.





### b) Historical calendar

The historical calendar is used represent climate (rain, temperature), resources (soil, water, trees) and agro activities (crop production, cultivated area, livestock) on a scale of 1-to-5 (where 1 is very low and 5 is very high). The columns can go up to 40 years in the past if there is good representation of old farmers that were farming at that time period (Figure 5).

• Respondents will be asked to put stones/ seeds. 1 stone to indicate low / poor and 5 stones to indicate high/very good

	Climate		Resour	ces		Agro activities				
	Rain	Temp.	Soil	Water	Trees	Crop	Cultivated	Livestock		
						production	area			
This										
year										
Last										
year										
-										
2 years										
ago										
10 years										
ago										
20 years										
ago										

Needed supplies include: markers, prepared sheet with matrix, seeds/stones, notebook and pen.



Figure 5: Historical Calendar.

# 8. Group 3: Institutional/Organization Mapping Activity—Venn diagram (1 hour)

This activity will be done in two groups; one group of men and one group of women.

The following description is taken from the FAO-CCAFS training manual (2012) p. 45 - 46.

#### **Purpose:**

The Venn diagram exercise is used to document the key local groups and institutions that are utilized by the target population or that are part of providing a specific service. Moreover, it can be used to clarify linkages between different groups and institutions (Figure 6).

#### **Process:**

You should organize separate groups of men and women that include a mix of socio-economic groups and ages.

- Ask the participants to name the various institutions, local and external, that provide services related to your area of focus (e.g. projects and activities related to agriculture). Encourage participants to mention informal groups too.
- For each institution ask the participant to indicate its main roles and services to the community.
- Ask them to write the names of institutions on paper and place them in the centre of the group. Once the institutions are displayed for all to see, ask the participants to decide whether each organization deserves a small, medium, or large circle (to represent its relative importance). The name or symbol of each organization should be indicated on each circle of different sizes.

Ask the participants which organizations work together or have overlapping memberships. The circles should be placed as follows:

- separate circle = no contact;
- touching circles = information passes between institutions;
- small overlap = some co-operation in decision making, planning and/or implementation; and
- large overlap = a lot of co-operation in decision making, planning and/or implementation.

Ask participants to discuss and explain why they ranked the institutions the way they did. There may be much negotiation before consensus is reached. You should note down if there are any institutions from which particular groups are excluded.

SEAGA guiding questions:

- Do women have decision making roles in the local institutions?
- Do the institutions in the Venn diagram target both men and women?
- Are there programmes specifically for women or youth in agriculture or animal or natural resources management? If yes, what organizations are involved?
  - What sources of information exist on farming practices?
  - Who provides advice to men and women on taking up farming practices, such as tree planting or improved soil management techniques and cropping patterns?
  - Have women provided input in institutions? If so how did in what ways did the women do this and the men react to it?
  - Are the specific needs of young and elderly people taken into account by local institutions?

The output of the exercise using a Venn diagram is a visualization of institutions present in the community. The diagram should make it clear to both participants and you as the facilitator, which institutions are central in providing specific services to the community. This can be a key tool in mapping institutions for further research and/or support to the community.

Needed supplies include: sticky notes or small pieces of paper, markers, tape, notebook, pen, cut out circles of three different sizes.



Figure 6: Institutional mapping exercise.

# 9. Reporting back (30-40 minutes)

Each group should be given time (about 5 minutes) to present their work to the larger group and then have a few questions, comments, and discussion. Clarify that the plenary has consensus on what is presented by each of the smaller group.

## Lunch

# **10. Guided Discussion (1 hour)**

This will be conducted in 3 main groups (men, women and youth)

The groups will continue with a guided discussion about some or all of the topics listed in the key informant section

To reflect on the activities and think about what the information means to them and how they might use it for change. Some potential guiding questions are listed below.

- 1. What are some of the main practices/issues related to:
  - i. Climate variability
  - ii. Market access
  - iii. Input availability
  - iv. Access to credit
  - v. Land access
  - vi. Pest & disease
  - vii. Seed supply
- 2. What are the challenges in agricultural production in relation to (i-vii above) that specifically relate to the group (i.e. men, women, youth)
- 3. What are the coping strategies
  - What would they like to see introduced to cope with the challenges
  - Also take this opportunity to discuss further any important aspects of interest that may have come up during the previous activities.

# 11. Wrapping up, Thanks & Group Photo

Conclude the workshop by thanking the participants for their participation and explain next steps. The report of the exercise will shared widely with various stakeholders such as government, donor agencies and research organizations. This will enable them understand opportunities and constraints in the region. A group photo can be taken and copies sent back to the community.

# **III. Expert/Key informant Interviews**

Key informant interviews will be conducted with those knowledgeable about agriculture and/or climate in the region. This includes agriculture and livestock officials, district-level, ward-level, and village-level authorities, local NGOs and farmer associations. The information gathered from each individual key informant depends on who you are talking to and their area of expertise. Questions in the section C: Appendix D will be used as a guideline. Before asking the questions, the informed consent should be read and signed (see Appendix A).

Local experts invited as key informants are interviewed as the workshop goes on, but in a different location /room or their meeting can occur at a different time.

# **IV. Farmer Interviews/ Transect Walk**

# **1. Farmer interviews**

Farmer interviews will be conducted with either the principal male or female decision-maker in the household (Figure 7). Other team members can chat with other household members and/or take a farm tour. These activities should be documented in team member notes and if applicable in the matrices in the appendices of this document. The interviews will be conducted to collect data on farm characteristics, dwelling characteristics, agriculture production, assets, expenditure, input use, farm and non-farm employment, vulnerability to shocks, food security, and to assess demonstration plots in the community. GPS coordinates of the household will be collected.

# 2. Transect walk/drive

A transect walk and/or drive through the study site will be conducted to identify landmarks such as soil type, vegetation, food and cash crops, socio-economic indicators, livestock and forestry. Specifically the transect walk will help to appreciation the biodiversity and the resource endowments and gain an understanding of the challenges and opportunities for agriculture in that area. The observations by the team will focus on:

- 1. Crops and livestock in the area
- 2. Farm types
- 3. Socio-economic indicators (such as farm size, markets, land management, natural resources (rivers, streams, forest, etc.), infrastructure, economic activities)
- 4. Soil type and topography
- 5. Photos & GPS mapping of key landmarks (hospitals/health centers, schools, markets)



Figure 7: Farmer interview.

# V. Appendices

# 1. Appendix A: Informed Consent

At the beginning of the workshop and for each interview we should obtain informed consent from all participants. This should include a brief description of the project and activities and that information will be kept confidential (we will not associate anyone's name to specific comments—unless they ask us to), participation is voluntary—if they do not wish to participate they do not have to--they can leave or remain quiet during the workshop--and there is no compensation but refreshments and transportation allowances will be given.

### a. Key Informant Interviews Informed Consent

The following statement (adapted from CCAFS household level baseline questionnaire) should be read and explained to the participant. The key informant should then sign and date the form. These forms should be kept with the interview notes.

"Good morning/afternoon. We are coming from ...... with permission from the local government. We are conducting a study to understand the farming systems, challenges and opportunities in the region and have chosen to work in this district/sub-county. We would like to ask you some questions that should take about one hour of your time. We would like to share some of this information widely in order that more people understand how food is grown and used in this region and the issues that are faced regarding food production and soil, water and land management.

The information you provide will be confidential; your name will not be associated with the specific information you give us; we will report trends that are identified from the data analysis. The information is used purely for research purposes; your answers will not affect any benefits or subsidies you may receive now or in the future. Do you consent to be part of this study? If there are questions that you would prefer not to answer then we respect your right not to answer them.

Please sign and date here indicating that you agree to participate:

(name)

(signature)

(date)

### b. Workshops Informed Consent

For workshops, the informed consent agreement should be read and explained to the group; then a representative should sign attesting to the fact that the statement was read. The following statement has been adapted from CCAFS Village level baseline guidelines (Förch et al 2011).

"Good morning/afternoon. We are coming from ...... with permission from the local government. We are conducting a study looking at farming systems, weather patterns, resources shared by the community, changes over time, and your visions of your community resources in the future. We would like to invite you to participate in our group activities. Some of you have been invited to participate in the sessions. This was done to not take too much of everyone's time. We are planning separate sessions for men and women, and mixed groups.

We will be taking notes for our benefit, so that we remember the discussions. We would like to share some of this information widely in order that more people understand how your community accesses resources and what opportunities and constraints you face. Names will not appear in any data that is made publicly available. The information you provide will be used purely for research purposes; your answers will not affect any benefits or subsidies you may receive now or in the future. If you are not comfortable with this, you do not have to participate. You may leave discussions at any time and if there are questions that you would prefer not to answer then we respect your right not to answer them."

*I*, \_\_\_\_\_\_, attest to the fact that this statement was read and explained

to the group at the beginning of the workshop.

(signature)

(date)

#### c. Farm interviews Informed Consent

The following statement (adapted from CCAFS household level baseline questionnaire) should be read and explained to the participant. The farmer should then sign and date the form. These forms should be kept with the interview notes.

"Good morning/afternoon. We are coming from ...... with permission from the local government. We are conducting a study to understand the farming systems, challenges and opportunities in the region and have chosen to visit your farm. We would like to ask you some questions that should take about one hour of your time. We would like to share some of this information widely in order that more people understand how food is grown and used in this region and the issues that are faced regarding food production and soil, water and land management.

The information you provide will be confidential; your name will not be associated with the specific information you give us; we will report trends that are identified from the data analysis. The information is used purely for research purposes; your answers will not affect any benefits or subsidies you may receive now or in the future. Do you consent to be part of this study? If there are questions that you would prefer not to answer then we respect your right not to answer them.

Please sign and date here indicating that you agree to participate

(signature)

(date)

# 2. APPENDIX B: Farm Interview Format

1.1Respondent's name (in full).....

1.2 Ward...... 1.3 Village.....

1.4 Age.....

1.5 What is your position in the household? .....

1.6 How many people currently reside in your household?
1. 7 What is the highest level of education in your household?
1.8 For how long have you been practicing farming?
1.9 Is the household polygamous or monogamous?If polygamous, number of wives
1.10 What do you mainly do for a living?

1.11 Is there any other activity you engage in apart from the activity mentioned above? ..... Specify (.....)

1.12 What is size of your farm .....(units).....

How many separate plots of land do you own?					
If owned, how did you obtain the land?					
What is the size of each plot?	1.	2.	3.	4.	
How far is each plot from your dwelling?					
Are any of these plots used primarily for home					
consumption?					
Did you rent land in the past twelve months? If yes					
how many seasons?					
How much land did you rent in each season					
What was the cost of renting this land?					
Did you rent out land? If yes, how much in the past					
12 months?					
How much did you charge?					

- 1. Where the farms are located (river bank/slope/ flat land)? If cultivating on river bank, what crops?
- Is any of your land irrigated?
   What area has irrigation?
- 4. What crops are irrigated?
- 5. What is your water source for irrigation?
- 6. What is the farming system (mixed crop-livestock/ commercial/subsistence)
  - a. What livestock does the family keep? Indicate type and number for each
  - b. What crops do you cultivate?
  - c. What are the three most important crops?
  - d. Are there any challenges in the crop –livestock interactions?

- 7. How would you rate the quality of your soil?
- 8. What do you do to make your soil good?
- 9. From where did you learn how to improve the quality of the soil?
- 10. Do you observe any problems related to soil erosion? What is the main source of erosion?
- 11. What do you do to control soil erosion?
- 12. Where do you sell your produce (name of market or town)?
- 13. What are the main challenges (if any) related to marketing?
- 14. Observe for other indicators such as infrastructure roads, markets, schools, water supply
  - a. Distance to nearest school
  - b. Distance to nearest market
  - c. Distance to health facility
  - d. What is the household's water source? What is the distance?

#### 1) Assets

• Observe the number and type of house (wall material and roofing)

Asset name	Numberofcurrently(by household)	assets owned	Owned by man, woman or jointly?
1. Ox-plough			
2. Ox-cart			
3. Chemical Sprayer/pump			
4. Wheel barrow			
5. Machete (panga)			
6. Bicycle			
7. Hoe			
8. Tractor			
9. Motorcycle			
10. Car			
11. Radio/radio cassette			

#### 2) Vulnerability

• What main challenges do you face in your farming related to climate variability?

- How do you cope with such challenges?
- What other natural disasters affect your farming activities?
- How many months is the household food sufficient
- What is the frequency of purchase of food crops, where do they buy?

### Income from agricultural production

	AGRICULTURAL CROPS (Last 12 months)											
		Divi	de producti	Sales ind (Tanzan Shilling)	come ian							
Name of crop	Annual production (kg)		Family consumption (kg)		Market (kg)				Total/Year			
	Short rains	Long rains	Short rains	Long rains	Short rains	Long rains	Short rains	Long rains				

	LIVESTOCK/FISH FARMING (Last 12 months)												
		Divi	Sales inco (Tanzania Shilling)										
Animal	Annual production (kg)		Family consumption (kg)		Market (kg)				Total/ Year				
	Short	Long	Short	Long	Short	Long	Short	Long					
	rains	rains	rains	rains	rains	rains	rains	rains					

				NO	N-A(	GRIC	ULT	URA	L INC	COM	E			
	Income (Use local currency)													
Activity	January	February	March	April	May	June	July	August	September	October	November	December	Total/Year	Community where the activity is performed

	EXTERNAL INCOME													
	Income (Use local currency)													
Activity 1. Remittances 2. Donations 3. Gifts 4. Subsidies	January	February	March	April	May	June	July	August	September	October	November	December	Total/Year	Institution/person who provided this income

#### Household expenditure

• Note amount paid in last year for activities such as school fees, services (for example water), personal (for example clothing), savings in banks, savings in groups, payment of loan (bank), Payment of loan (groups), health, church? For each expenditure category, how many times did you pay? For what period (hour, day, month, year)? For how long? *(use matrix)* 

Expenditure (Use local currency)											
Activity 1. School fees 2. Services 3. Clothing 4. Housing 5. Savings 6. Gifts/donatio ns 7. Loan	Expenditure Total amount paid in last year	e (Use local currency) How many times did you pay	For how long								

# Expenditure on farm inputs

Type of input / activity	Used	Bought	Amount	Price	If price is
	last	or free	bought	(specify	not
	year?		(specify	unit)	known,
			units)		total cost?
Fertilizer (specify)					
Seeds					
Herbicides (specify)					
Pesticides for crops (specify)					
Pesticides for livestock (specify)					
Livestock feed					

# Labour

Crop	Activity	No	of	Frequency	Period of	Number	Frequency	Period of	Cost
		people		(number	reference	of hired	(number	reference	of
		(family		of times)	(hr, day,	people	of times)	(hr, day,	hired
		labor)			month,			month,	labour
					year)			year)	per
									period

Crop and Land management practices	Are you practicing (Yes/NO)	Are you aware of the practice
terracing		
mulching		
inorganic fertilizer use		
compost		
farmyard manure		
contour ploughing		
burning, cover		
green manure		
Cover crops		
zero tillage		
irrigation		
intercropping		
fallowing		
crop rotation		
agroforestry		
organic agriculture		
rain water harvesting		
ridges / bunds		

When you need information/advice about agricultural production, who do you go to (**Identify up to 5 people or institutions**)

- 1.
- 2. 3.
- *3*. 4.
- <del>т</del>. 5.

# **Assessment of Demonstration plots**

1. <u>Community demo plot farmers</u>

### COMMUNITY DEMONSTRATION PLOT NAME:

1. Are you aware of any demo plots in the community?

#### If Yes above:

- 2. How did you first become aware of the \*demo\* initiative? (*Have they attended workshops etc?*)
- 3. Are you involved in the \*demo\*?...... How?
- **4.** If answer is "NO" in 3, Did you have an opportunity to be involved? / Were you interested in being involved?
- 5. Can you describe the demo plot; what is being grown, what practices are being used?
- 6. i) What do you think the \*demo\* is aiming to achieve?
  - ii) Is the progress of the \*demo\* measured? How?
- 7. How is the \*demo\* managed? (DISCUSS: By the community / the organisation / individually? Who is involved men, women, youth? Is there a CBO? Any payments to be involved? Division of inputs labour, fertilizer, costs? Division of outputs / products?)
- 8. ii) Do you think the management of the \*demo\* works well or not well? (Why?)
  - iii) Have there been any challenges? (How are these reported? Have they been solved how?)
- 9. Overall what do you think is the best thing about the \*demo\* project?
- **10.** Overall what do you think can be improved about the \*demo\* project?
- **11.** Has there been interest from farmers in other villages in the \*demo\* plot?

- **12.** If this \*demo\* was set up in another village do you think it would work in the same way for that community as it does in your village?
- **13.** Do you think these projects make a difference to the whole community, just to the farmers involved or they make no difference?

#### If answer is "No" above:

- 1. Facilitator to explain to the farmer briefly what is a demonstration plot and give an example
- 2. Would you be interested be involved in a demo plots?
- 3. What practices would you like to see implemented in a demo plot?
- 4. How best do you think this can be done (e.g. community land, farmer field, in farmer groups)
- 5. How would you like to see the demo plot managed
- 6. Supposing the demo you described was implemented: How would like to be involved in the demo? What role would you like to play?

#### 2. Farmers with demo plots on their farms

#### **TYPE OF DEMONSTRATION PLOT:**

- 1. How long have you had the demo plot on your farm?
- 2. How did you first become aware of the demo initiative? (Have they attended workshops etc?)
- **3.** i) How were you selected to implement the demo on your farm? (*Are there other farmers with the same demo plots*) (ii) Why did you want to be involved?
- 4. i) Can you describe the demo plot; what is being grown, what practices are being used?

- 5. How were you farming this land before the demo plot?
- 6. Do you think the demo plot is working well? How do you measure this?
- 7. Have there been any challenges? (*How are these reported? Have they been solved how?*)
- 8. What do you think the demo is aiming to achieve? (*Will it do so?*)
- 9. Overall what do you think is the best thing about the demo project?
- **10.** Overall what do you think is the worst thing about the demo project?
- **11.** i) Has there been interest from other farmers in the demo plot on your farm? ii) Do you share the information you have learnt?

# 3. Appendix C: Expert Interview Format

#### 1. District name

- a) Total number of wards
- b) Total number of villages
- I. What are households like? Are there many female headed and/or child-headed households?
- II. What is typical and range of family structures (i.e. monogamous, polygamous, male headed, female headed, child headed, etc.)?
- III. What role do men typically play in the household?
- IV. What role do women typically play in the household?
- V. How are decisions (agricultural and non-agricultural) made in the household?
  - What decisions do men typically make alone
  - What decisions do women make alone

- What decisions are made jointly?
- VI. What are the main ethnic groups in the region?
- VII. What are the main religions?

VIII. What other activities do you (farmers) engage in as a source of income besides agriculture?

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# 2. What are the key groups/organizations that work in the district?

Organization/Group	Topic/Field	Type of organization	Ward/village

#### 3. Farming systems

What is the percentage of farms that are:

Farming system	Percentage	REMARKS		
			4	
Subsistence farming			4.	I.
Commercial farming			hat	
Single cropping			is	
Mixed cropping (crop			the	
&livestock)			larg	
est farm	size in acres (in	the district or ward) []	C	

II. What is the smallest farm size in acres (in the district or ward) [\_\_\_\_]

III. What's an average/typical farm size (acres) [\_\_\_\_]

#### 5. What are the 5 most important crops

- i.
- ii.
- iii.
- iv.
- v.

#### 6. What are the 5 most important livestock

- i.
- ii.
- iii.
- iv.
- V.

7. Are there any challenges in the crop-livestock interactions?

#### 8. What are the common crop and livestock management practices?

Practice	Сгор	Livestock	Remarks

١

Have the crop management practices changed over the last 10 years? If yes, how have the crop management practices changed over the last 10 years and why?

Have the livestock management practices changed over the last 10 years? If yes, how have the livestock management practices changed over the last 10 years and why? \_

\_ \_\_\_ \_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_\_\_ \_\_\_\_ \_ \_ \_ \_ \_ \_\_ \_\_ \_\_\_\_\_ \_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_ \_\_\_ \_\_ \_\_ \_\_ \_\_ \_\_ \_\_ \_\_

#### 9. What other practice would you like to see implemented? (For both crops and livestock)

Practice	Immediate/Mid- term/Long-term	Why (benefits)	Why is the practice not in use

Category	Challenge
Climate variability	
Market access	
Input availability	
Credit	
Land access	
Pest & Disease	
Seed supply	
Agricultural inputs	
Land preparation	
Weeding	
Harvesting	
Post-harvest	
Transport	
Marketing	
Other	

## 10. What challenges do farmers mainly face in relation to:

#### 11. Markets

\_ \_\_\_

\_ \_\_\_\_ \_\_ \_\_ \_\_ \_\_ \_\_ \_\_

I. Where are the main markets for agricultural goods? a. To sell?

\_\_\_\_\_ \_\_\_\_\_

\_\_\_ \_\_\_\_

b. To buy?

## 12. What are the key sources of information for farmers?

	e	Type of information	Mainly, who receives this
3 W	hat are the climate	information noods for forme	1 <b>2</b> 6
<b>5.</b> w			
<b>4. La</b> I.	and tenure and prop What is the land te	p <b>erty rights</b> enure system ( Freehold, Leaseb	nold. Mailo or Customary) [
<b>4.</b> La I.	and tenure and prop What is the land te	perty rights enure system ( Freehold, Leaseh ]	nold, Mailo or Customary) [
<b>4. La</b> I. II.	And tenure and prop What is the land te 	perty rights enure system (Freehold, Leasel ] [	nold, Mailo or Customary) [
<b>4. La</b> I. II.	The formula and properties and tenure and properties what is the land tenure and the land tenure and ownership a. If collective	perty rights enure system (Freehold, Leasek ] [] re ownership, how is land divide	nold, Mailo or Customary) [
<b>4. L</b> a I. II.	and tenure and prop         What is the land te               Land ownership         a.       If collectiv	perty rights enure system (Freehold, Leasel ] [] // e ownership, how is land divide	nold, Mailo or Customary) [] ] ed?[]
<b>4.</b> La I. II.	And tenure and prop What is the land te  Land ownership a. If collectiv 	perty rights enure system (Freehold, Leasel ] [] /e ownership, how is land divide	nold, Mailo or Customary) [] ed?[]
<b>4. L</b> a I. II.	And tenure and prop What is the land te — — — — — — Land ownership a. If collectiv — — — — If land is not owner	perty rights enure system (Freehold, Leasel ] [] /e ownership, how is land divide  d, how is access and use determ	nold, Mailo or Customary) [] ed?[] ] 
<b>4.</b> La I. II.	And tenure and prop What is the land te Land ownership a. If collectiv	perty rights enure system (Freehold, Leasel ] [] /e ownership, how is land divide d, how is access and use determ	nold, Mailo or Customary) [] ed?[] ] 
<b>4. L</b> a I. II.	and tenure and prop         What is the land te	perty rights enure system (Freehold, Leasel ] [] ve ownership, how is land divide d, how is access and use determ	nold, Mailo or Customary) [] ed? [] 
<b>4.</b> La I. II. III.	and tenure and prop         What is the land te	perty rights enure system (Freehold, Leasel ] [] /e ownership, how is land divide d, how is access and use determ  pping systems? [	nold, Mailo or Customary) [] ed? [] 
<ul> <li>4. La</li> <li>I.</li> <li>II.</li> <li>III.</li> <li>IV.</li> <li>V.</li> <li>V.</li> </ul>	and tenure and prop         What is the land te	perty rights enure system (Freehold, Leasel ] [] /e ownership, how is land divide d, how is access and use determ d, how is access and use determ  pping systems? [ o rents (e.g. the rich, etc)	nold, Mailo or Customary)       []         ed? []      ]         ined? [
4. La I. II. III. III. IV. V. VI.	and tenure and prop         What is the land te	perty rights enure system (Freehold, Leasel ] [] /e ownership, how is land divide d, how is access and use determ d, how is access and use determ pping systems? [ o rents (e.g. the rich, etc) women own land [	nold, Mailo or Customary)       []         ed? []      ]         ined? []         ]
4. La I. II. III. III. V. V. VI.	and tenure and prop         What is the land te	perty rights enure system (Freehold, Leasel ] [] /e ownership, how is land divide d, how is access and use determ d, how is access and use determ  o rents (e.g. the rich, etc) women own land []	nold, Mailo or Customary)       []         ed?       []         ined?       []        ]
4. La I. II. III. III. V. VI. VI.	and tenure and prop         What is the land te	perty rights enure system (Freehold, Leasel ] [] /e ownership, how is land divide  d, how is access and use determ  o rents (e.g. the rich, etc) women own land [] land from deceased husbands [	nold, Mailo or Customary) [] ed? [] 
4. La I. II. II. III. V. VI. VI. III.	and tenure and prop         What is the land te	perty rights         enure system ( Freehold, Leasel	nold, Mailo or Customary)       []         ed?       []         ined?       []        ]      ]
4. La I. II. III. III. IV. V. VI. 'II. III. I	and tenure and prop         What is the land te	perty rights         enure system ( Freehold, Leasel	nold, Mailo or Customary)       []         ed?       []         ined?       []        ]      ]        ]      ]        ]      ]        ]      ]

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### **15. Land use and management practices**

I. What are the main land management practices (i.e. terracing, mulching, inorganic fertilizer use, compost, farmyard manure, contour ploughing, burning, cover crops, green manure, zero tillage, irrigation, intercropping, fallows, crop rotation, agroforestry, reforestation, rain water harvesting, organic agriculture, ridges / bunds)

\_ \_\_ \_\_

II. What kinds of land management practices, do you think would be beneficial? What are the constraints to undertaking such practices?

General guidance:

Land management practice	Why (Benefits)	Why is it not being used (constraints)

- a. Please note who is present in this meeting including designation
- b. Try to complete this within an hour so as not to take up officials' time
- c. Acknowledge their support during this assessment, please offer THANKS for their participation
- d. Please tell the officials we will be happy to share overall report with them and record the key person's correct contact details for this purpose below.

Name	Designation	email