

# Coping with El Nino in Tanzania: Differentiated local impacts and household- level responses

WIFE'S HOMESTEAD LIVELIHOODS SURVEY

(July 20th, 2016, V4)

## Requesting to talk to the wife of the homestead head

*[After the interview with male homestead head is finished]* Ask the head of homestead if we you can talk to his wife about some of the issues that were discussed with him in the interview. *Note: in case homestead head has several wives, ask if you can talk to the older wife.*

*[If yes]* May I ask how long you have been married to your wife? *[If married since 2014 or longer, accept the permission. If not married by 2014, thank the homestead head for the permission but decline the kind offer to talk to the wife. If several wives available, ask if there is a wife that has been married to the homestead head since at least 2014 (or longer)]*

<b>0.1 Village ID:</b>	
<b>0.2 Homestead ID:</b>	
<b>0.3 Date and time of interview:</b> (time = END of interview)	:
<b>0.4 Enumerator:</b>	
<b>0.5 Was this person interviewed for PIMA study?</b>	

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## 1. Information to the respondent

We are a partnership of Tanzanian and European research organisations. During 2015-2016, Tanzania experienced a particular climate event called the El Nino, which changes patterns of rainfall and of drought. We are studying the ways that the 2015-6 El Nino climate event has affected people's livelihoods. We also study the ways in which the management of natural resources and peoples' access to these resources during the El Nino event may have been affected by wildlife management areas (WMAs) through effects on availability and quality of water and land, grazing, fish, forest products and wildlife, opportunities for jobs and businesses, for example with tourism, and also on people's social and religious lives. We will work in WMA and non-WMA villages, because the comparison can help us understand the effects on people's climate coping strategies of different ways of managing natural resources.

We are inviting people in this and other villages to discuss the social and environmental effects of the changes in seasons, rainfall, drought or temperature experienced during 2015-6, and the ways in which WMAs may have helped or hindered coping strategies, so that the government and other organizations can understand better how these changes affect different people - men and women, better-off and poorer people, sedentary and migrating people, youth and older people.

For anyone who does talk with us, anything he or she says will be kept in complete confidence. If anyone agrees to talk with us and then changes their mind partway through, they can just say at any time that they want to stop and withdraw from the interview, without this being a problem for anyone. We take care to make sure that no one is put into difficulties as a result of this research. Copies of information about our research will be left in the WMA and village government offices, and anyone with questions or concerns can contact us or the funding agency, using the contact details we provide. At the end of the study we will share the main findings with the village.

We hope this study will make it easier for people to inform the government and NGOs about resource and management needs during extreme climate events, and more generally as climate and weather patterns change. We also hope to understand more about what works best for sustainable management of local natural resources. We hope that the findings we bring back to the village at the end of the study will help you in negotiating good outcomes with the government and with businessmen.

1.1. Has this information been disseminated to the respondent and does he/she consent to participate in the interview?

*Code 1:*

*Code 1: [Select one option]*

*0 = no; 1 = yes*

**If 1.1 = "No", then cease the interview.**

## 2. Basic household demographics

*Note: Explain to the respondent that in following we will ask about the situation now and as things were in the year 2014. Explain to the respondent that in following we will ask about the situation now and as things have changed since the year 2014. Ask if the respondent remembers how life was for the homestead and the community in 2014 prior to the election year. If the respondent does not remember this event, ask to remember personal events (e.g. birth of a child, built the house) or local events (election of VC etc.) from the time around 2014.*

*Ask the respondent to think back and recall the circumstances of her and her dependents' livelihoods, and overall for the household of which she is part, around that period in the following questions.*

2.1. Do you recall 2014 and are you able to recall the circumstances of your livelihood around then?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

2.2. How old are you?

Code 1:

*Note: If response seems unlikely then ask about year born and calculate backwards and check consistency.*

Code 1: [Select one option]

1 = < 20 years; 2 = 20-29 years; 3 = 30-39 years; 4 = 40-49 years; 5 = 50-59 years; 6 = 60-69 years;

7 = 70-79 years; 8 = 80-89 years; 9 = >89 years.

-7= refuses to answer; -8=does not apply; -9=don't know

2.3. Married/own sub-household or *aji* now?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

2.4. Married/own sub-household or *aji* in 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

2.5. How many years of schooling have you completed?

Number:

*Note: If respondent doesn't know then write -9.*

### 3. Overall well-being trends

*[Explain to the respondent] Now we would like to ask about your wellbeing and that of your homestead members. By wellbeing we mean your ability to be happy, healthy and successful. This includes your overall feelings about your economic, food security, social and spiritual state.*

3.1. How has your personal wellbeing changed since 2014? Do you consider that your life is generally...

Code 1:

Code 1: *[Select one option]*

1 = Much worse now; 2 = Worse now; 3 = About the same as it was; 4 = Better now; 5 = Much better now; -7 = refuses to answer; -8 = does not apply; -9 = don't know.

3.2. What were the main challenges for you personally and your household in 2014?

*[Enumerator: Don't prompt, but if several are mentioned record them all.]*

Challenge	<b>3.2.1. What were the main challenges that you personally and your household faced in 2014?</b> <i>Select all that apply</i>	<i>Show question for any items selected in 3.2.1</i> <b>How important was this for you and your household in 2014?</b> <i>Code 1</i>
<b>Land availability</b> (e.g. access, suitability)		3.2.2.
<b>Water availability</b> (e.g. access, quality)		3.2.3.
<b>Availability of natural resources (fuel, poles, etc)</b> (e.g. access, quantity)		3.2.4.
<b>Rain</b> (too much/too little/ timing)		3.2.5.
<b>Temperature</b> (too high/ too low/ timing)		3.2.6.
<b>Wildlife damage/ threat</b>		3.2.7.
<b>Pests</b>		3.2.8.
<b>Diseases</b> (e.g. of people, livestock, crops)		3.2.9.
<b>Unemployment</b>		3.2.10.
<b>Infrastructure</b> (e.g. roads, shops, transport....)		3.2.11.
<b>Education</b>		3.2.12.
<b>Governance/political/conflict issues</b>		3.2.13.
<b>External investors</b> (too many/ too few/ non-compliant)		3.2.14.
<b>Poverty/ inequality</b>		3.2.15.

<b>Women's issues</b>		3.2.16.
<b>Youth issues</b>		3.2.17.
<b>Personal relationships within the family</b>		3.2.18.
<b>Personal relationships with other families and social standing</b>		3.2.19.
<b>Family health and wellbeing</b>		3.2.20.
<b>Farm inputs</b> (e.g. crop varieties, fertiliser)		3.2.21.
<b>Other (specify)</b>		3.2.22.

Code 1: [Select one option]

1 = Very small problem; 2 = Small problem; 3 = Moderate problem; 4 = Big problem; 5 = Very big problem;  
-7 = refuses to answer; -8 = does not apply; -9 = don't know.

3.3. What do you see as the main challenges for you personally and your household today?

[Enumerator: Don't prompt, but if several are mentioned record them all.]

<b>Challenge</b>	<b>3.3.1. What are the main challenges that you personally and your household face today?</b> <i>Select all that apply</i>	<i>Show question for any items selected in 3.3.1</i> <b>How important is this for you and your household today?</b> <i>Code 1</i>
<b>Land availability</b> (e.g. access, suitability)		3.3.2.
<b>Water availability</b> (e.g. access, quality)		3.3.3.
<b>Availability of natural resources (fuel, poles, etc)</b> (e.g. access, quantity)		3.3.4.
<b>Rain</b> (too much/too little/ timing)		3.3.5.
<b>Temperature</b> (too high/ too low/ timing)		3.3.6.
<b>Wildlife damage/ threat</b>		3.3.7.
<b>Pests</b>		3.3.8.
<b>Diseases</b> (e.g. of people, livestock, crops)		3.3.9.
<b>Unemployment</b>		3.3.10.
<b>Infrastructure</b> (e.g. roads, shops, transport....)		3.3.11.
<b>Education</b>		3.3.12.
<b>Governance/political/conflict issues</b>		3.3.13.

<b>External investors</b> (too many/ too few/ non-compliant)		3.3.14.
<b>Poverty/ inequality</b>		3.3.15.
<b>Women's issues</b>		3.3.16.
<b>Youth issues</b>		3.3.17.
<b>Personal relationships within the family</b>		3.3.18.
<b>Personal relationships with other families and social standing</b>		3.3.19.
<b>Family health and wellbeing</b>		3.3.20.
<b>Farm inputs</b> (e.g. crop varieties, fertiliser)		3.3.21.
<b>Other (specify)</b>		3.3.22.

Code 1: [Select one option]

1 = Very small problem; 2 = Small problem; 3 = Moderate problem; 4 = Big problem; 5 = Very big problem; -7 = refuses to answer; -8 = does not apply; -9 = don't know.

## 4. Livestock

[Enumerator]: Explain to the respondent, that here we ask about livestock that is owned by everyone in your homestead, independent of who is the actual owner within this homestead (it could be the homestead head, his wife, children etc.):

4.1. Have you had livestock, fishponds or beehives now or at any time since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 4.1 = "No" go to 5.1

4.2. Please tell me about the livestock your homestead owned at the END OF LAST DRY SEASON (Kiangazi).

Note: In the following questions, when we refer to produce we include milk, meat, eggs, hides, honey and other products

Species	Do you or your dependents have animals whose produce you and your dependents can CONSUME? Code 1	Do you or your dependents SELL products from these animals? Code 1	How has these animals' level of production changed since 2014? Code 2	What caused this change? Code 3	Was the situation improved or worsened by this institution? Code 4

<b>Cattle (incl. adult bulls, adult cows and calves)</b>	4.2.1.	<i>If 4.2.1 = 1</i> 4.2.2.	<i>If 4.2.1 = 1</i> 4.2.3.	<i>If 4.2.3 = 1,2,4,5</i> 4.2.4.	<i>If 4.2.4 = 14,15,16,17</i> 4.2.5.
<b>Goats (incl. kids)</b>	4.2.6.	<i>If 4.2.6 = 1</i> 4.2.7.	<i>If 4.2.6 = 1</i> 4.2.8.	<i>If 4.2.8 = 1,2,4,5</i> 4.2.9.	<i>If 4.2.9 = 14,15,16,17</i> 4.2.10.
<b>Sheep (incl. lambs)</b>	4.2.11.	<i>If 4.2.11 = 1</i> 4.2.12.	<i>If 4.2.11 = 1</i> 4.2.13.	<i>If 4.2.13 = 1,2,4,5</i> 4.2.14.	<i>If 4.2.14 = 14,15,16,17</i> 4.2.15.
<b>Donkeys or mules</b>	4.2.16.	<i>If 4.2.16 = 1</i> 4.2.17.	<i>If 4.2.16 = 1</i> 4.2.18.	<i>If 4.2.18 = 1,2,4,5</i> 4.2.19.	<i>If 4.2.19 = 14,15,16,17</i> 4.2.20.
<b>Pigs (incl. piglets)</b> <i>Note: sensitive for Muslims</i>	4.2.21.	<i>If 4.2.21 = 1</i> 4.2.22.	<i>If 4.2.21 = 1</i> 4.2.23.	<i>If 4.2.23 = 1,2,4,5</i> 4.2.24.	<i>If 4.2.24 = 14,15,16,17</i> 4.2.25.
<b>Fishponds</b>	4.2.26.	<i>If 4.2.26 = 1</i> 4.2.27.	<i>If 4.2.26 = 1</i> 4.2.28.	<i>If 4.2.28 = 1,2,4,5</i> 4.2.29.	<i>If 4.2.29 = 14,15,16,17</i> 4.2.30.
<b>Beehives</b>	4.2.31.	<i>If 4.2.31 = 1</i> 4.2.32.	<i>If 4.2.31 = 1</i> 4.2.33.	<i>If 4.2.33 = 1,2,4,5</i> 4.2.34.	<i>If 4.2.34 = 14,15,16,17</i> 4.2.35.
<b>Poultry</b>	4.2.36.	<i>If 4.2.36 = 1</i> 4.2.37.	<i>If 4.2.36 = 1</i> 4.2.38.	<i>If 4.2.38 = 1,2,4,5</i> 4.2.39.	<i>If 4.2.39 = 14,15,16,17</i> 4.2.40.

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 2: [Select one option]

1 = much less now; 2 = less now; 3 = no change; 4 = more now; 5 = much more now;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 3: [Select all that apply]

1 = drought; 2 = surface flooding; 3 = too much rain; 4 = very low temperature; 5 = very high temperature;

6 = disease; 7 = change in access to fodder/grazing; 8 = cash needs/saving of surplus;

9 = gave away some livestock to children; 10 = reproduction; 11 = purchased animals; 12 = theft;

13 = loss to wildlife attack; 14 = rules of state institutions; 15 = WMA rules; 16 = village government rules;

17 = customary rules;

30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 4: [Select one option]

1 = much worse; 2 = worse; 3 = no change; 4 = better; 5 = much better;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

## 5. Farm / Garden

5.1. Does your homestead have a farm (shamba) or your household a garden (bustani) now or has it had one at any time since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 5.1 = "Never" go to 6.1, otherwise go to 5.2

5.2. Do you have access to produce from a field (SHAMBA) in your homestead?

Note: Here we are interested in ACCESS, defined as being able to consume or sell all or part of the products yourself without asking permission from the head of homestead/ your husband, irrespective of who owns the shamba. We are also specifically referring to SHAMBA produce here, NOT bustani which we ask about in subsequent questions

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

5.3. How many months did the SHAMBA crop feed your dependents in your sub-household/aji in the last farming year?

Note: Ask this question irrespective of the wife's access

Code 1:

Code 1: [Select one option]

0 = none; 1 = 1 month; 2 = 2 months; 3 = 3 months; 4 = 4 months; 5 = 5 months; 6 = 6 months; 7 = 7 months; 8 = 8 months; 9 = 9 months; 10 = 10 months; 11 = 11 months; 12 = 12 months;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

5.4. How many months did the SHAMBA crop feed your dependents in your sub-household/aji in the 2014 farming year?

Note: Ask this question irrespective of the wife's access

Code 1:

Code 1: [Select one option]

0 = none; 1 = 1 month; 2 = 2 months; 3 = 3 months; 4 = 4 months; 5 = 5 months; 6 = 6 months; 7 = 7 months; 8 = 8 months; 9 = 9 months; 10 = 10 months; 11 = 11 months; 12 = 12 months;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 5.3 is different from 5.4:

5.5. What was the main cause of any change? Change perceived by the respondent to be related to:

Code 1:

Code 1: [Select all that apply]

0 = no particular reason; 1 = drought; 2 = heavy rain; 3 = flood; 4 = rain at unexpected times;

5 = changing seasons; 6 = changing temperature; 7 = crop disease; 8 = crop pest; 9 = change in crop varieties;

10 = change in abundance of wildlife; 11 = wildlife behaving differently;

12 = change in ability to protect/care for crops; 13 = threat of punishment if wildlife is harmed;

14 = customary rules; 15 = village rules; 16 = WMA rules; 17 = national rules;

18 = availability of resources (e.g. time, money, assistance); 19 = changing household needs;

30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know



5.6. Do you have access to produce from a garden (BUSTANI) in your homestead?

*Note: Here we are interested in ACCESS, defined as being able to consume or sell all or part of the products yourself without asking permission from the head of homestead/ your husband, irrespective of who owns the bustani. We are also specifically referring to BUSTANI produce here, NOT shamba which was dealt with in the previous questions*

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

### Sale of crops

5.7. Do you or any of your dependents SELL crops from a shamba/bustani, the proceeds of which you are able to keep for yourself and your dependents?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

5.8. How has the amount of crops you sell from a shamba/bustani changed since 2014?

Code 1:

Code 1: [Select one option]

0 = has not sold crops at any point during this period; 1 = much less now; 2 = less now; 3 = no change;

4 = more now; 5 = much more now;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

*If 5.8 = 1,2,4,5:*

5.9. What was the main cause of this change? Change perceived by the respondent to be related to:

Code 1:

Code 1: [Select all that apply]

0 = no particular reason; 1 = change in quantity of crops grown; 2 = change in market prices;

3 = change in opportunities to sell crops related to tourism;

4 = change in opportunities to sell crops not related to tourism; 5 = change in number of dependents;

6 = change in income generated from other sources;

7 = need to raise cash for specific purpose (e.g. school or medical fees);

30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know.

## 6. Income generation

6.1. I am going to read out a list of products. For each one, tell me if you or any of your dependents ever sell this product nowadays, whether the amount of income you gain from these sales has changed since 2014 and, if so, what has caused this change?

*Note: Enumerator, please ask about each of the various resources and services*

<b>Product</b>	<b>Do you or any of your dependents ever sell this product nowadays?</b> <i>Code 1</i>	<b>How has the amount of income you gain from this source changed from 2014 to NOW?</b> <i>Code 2</i>	<b>What has changed to cause this?</b> <i>Code 3</i>
<b>Plant medicines</b>	6.1.1.	6.1.2.	<i>If 6.1.2 = 1,2,4,5</i> 6.1.3.
<b>Wild bee honey</b>	6.1.4.	6.1.5.	<i>If 6.1.5 = 1,2,4,5</i> 6.1.6.
<b>Firewood</b>	6.1.7.	6.1.8.	<i>If 6.1.8 = 1,2,4,5</i> 6.1.9.
<b>Charcoal</b>	6.1.10.	6.1.11.	<i>If 6.1.11 = 1,2,4,5</i> 6.1.12.
<b>Poles</b>	6.1.13.	6.1.14.	<i>If 6.1.14 = 1,2,4,5</i> 6.1.15.
<b>Thatch</b>	6.1.16.	6.1.17.	<i>If 6.1.17 = 1,2,4,5</i> 6.1.18.
<b>Water</b>	6.1.19.	6.1.20.	<i>If 6.1.20 = 1,2,4,5</i> 6.1.21.
<b>Crafts</b>	6.1.22.	6.1.23.	<i>If 6.1.23 = 1,2,4,5</i> 6.1.24.
<b>Petty vending (e.g. tea, sugar)</b>	6.1.25.	6.1.26.	<i>If 6.1.26 = 1,2,4,5</i> 6.1.27.
<b>Cooked foods (e.g. mendazi, roast maize)</b>	6.1.28.	6.1.29.	<i>If 6.1.29 = 1,2,4,5</i> 6.1.30.
<b>Professional paid work (e.g. midwifery/ healing practices teacher, nurse, secretary)</b>	6.1.31.	6.1.32.	<i>If 6.1.32 = 1,2,4,5</i> 6.1.33.
<b>Shopkeeper / assistant</b>	6.1.34.	6.1.35.	<i>If 6.1.35 = 1,2,4,5</i> 6.1.36.
<b>Hired labour (Kibarua; e.g. weeding, construction)</b>	6.1.37.	6.1.38.	<i>If 6.1.38 = 1,2,4,5</i> 6.1.39.

*Code 1: [Select one option]*

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know.

*Code 2: [Select one option]*

1 = much worse; 2 = worse; 3 = no change; 4 = better; 5 = much better;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

*Code 3: [Select all that apply]*

0 = no particular reason; 1 = change in abundance of resource; 2 = change in market prices;  
3 = change in demand/opportunities to sell product related to tourism;  
4 = change in demand/opportunities to sell product not related to tourism;  
5 = change in number of dependents; 6 = change in income generated from other sources;  
7 = need to raise cash for specific purpose (e.g. school or medical fees); 8 = change in WMA rules;  
9 = change in customary rules; 10 = change in village rules;  
11 = change in state rules (e.g. NP/Corridor/GCA /GR); 12 = drought; 13 = too much rain; 14 = flooding;  
15 = disease; 16 = change in climatic conditions;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

## 7. Remittances

7.1. Do you personally or any of your dependents receive remittance from family members present or absent (e.g. wage-earning son)?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

7.2. How has the value of remittances you receive changed since 2014?

Code 1:

Code 1: [Select one option]

0 = has not received remittances at any point during this period; 1 = much less now; 2 = less now; 3 = no change;  
4 = more now; 5 = much more now;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 7.2 = 1,2,4,5:

7.3. What was the main cause of this change? Change perceived by the respondent to be related to:

Code 1:

Code 1: [Select all that apply]

0 = no particular reason; 1 = change in number of family members earning income;

2 = change in number of dependents; 3 = change in income generated from other sources;

4 = need to raise cash for specific purpose (e.g. school or medical fees); 5 = change in WMA rules;

6 = change in customary rules; 7 = change in village rules;

8 = change in state rules (e.g. NP/Corridor/GCA /GR); 9 = drought; 10 = too much rain; 11 = flooding;

12 = crop or livestock disease; 13 = Change in wildlife damage to crops or livestock;

14 = change in climatic conditions;

30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

## 8. Food security

8.1. How do you see your ability to provide food for yourself and your dependents nowadays?

Code 1:

Code 1: [Select one option]

1 = very hard to provide enough food; 2 = hard to provide enough food; 3 = easy to provide enough food;

4 = very easy to provide enough food;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

## 8.2. How has your ability to provide food for yourself and your dependents changed since 2014?

Code 1:

Code 1: [Select one option]

1 = much harder now; 2 = harder now; 3 = no change; 4 = easier now; 5 = much easier now;  
-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 8.2 = 1,2,4,5:

## 8.3. What was the main cause of this change? Change perceived by the respondent to be related to:

Code 1:

Code 1: [Select all that apply]

0 = no particular reason; 1 = change in number of family members earning income;  
2 = change in number of dependents; 3 = change in income generated from other sources;  
4 = need to raise cash for specific purpose (e.g. school or medical fees); 5 = change in WMA rules;  
6 = change in customary rules; 7 = change in village rules;  
8 = change in state rules (e.g. NP/Corridor/GCA/GR); 9 = drought; 10 = too much rain; 11 = flooding;  
12 = change in crop or livestock disease; 13 = change in wildlife damage to crops or livestock;  
14 = change in climatic conditions;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

## 9. Coping strategies

### “Normal” years

#### 9.1. Is there such a thing as a “normal” year in terms of rainfall?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;  
-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.1 = “Yes” go to 9.2, otherwise go to 9.4

#### 9.2. Has there been such a year since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;  
-7 = refuses to answer; -8 = does not apply; -9 = don't know

#### 9.3. We would like you to tell us what approaches you usually take in a normal year to help manage subsequent years’ challenges and shocks (incl. environmental / family / economic / other)?

Strategy	Do YOU adopt this strategy? Code 1	If not, why? Code 2	If yes, how successful is it? Code 3	What affects its success? Code 4	If rules, are they supportive or restrictive? Code 5
Clear more land	9.3.1.	If 9.3.1 = 0 9.3.2.	If 9.3.1 = 1 9.3.3.	If 9.3.1 = 1 9.3.4.	If 9.3.4 = 9,10,11,12,13 9.3.5.
Grow basic range of crops	9.3.6.	If 9.3.6 = 0 9.3.7.	If 9.3.6 = 1 9.3.8.	If 9.3.6 = 1 9.3.9.	If 9.3.9 = 9,10,11,12,13 9.3.10.

<b>Experiment with new crops</b>	9.3.11.	<i>If 9.3.11 = 0</i> 9.3.12.	<i>If 9.3.11 = 1</i> 9.3.13.	<i>If 9.3.11 = 1</i> 9.3.14.	<i>If 9.3.14 = 9,10,11,12,13</i> 9.3.15.
<b>Invest in farm inputs</b> <i>Note: incl. fencing; farm equipment; better seed; pesticide</i>	9.3.16.	<i>If 9.3.16 = 0</i> 9.3.17.	<i>If 9.3.16 = 1</i> 9.3.18.	<i>If 9.3.16 = 1</i> 9.3.19.	<i>If 9.3.19 = 9,10,11,12,13</i> 9.3.20.
<b>Invest in more livestock numbers</b>	9.3.21.	<i>If 9.3.21 = 0</i> 9.3.22.	<i>If 9.3.21 = 1</i> 9.3.23.	<i>If 9.3.21 = 1</i> 9.3.24.	<i>If 9.3.24 = 9,10,11,12,13</i> 9.3.25.
<b>Invest in improved livestock breeds</b>	9.3.26.	<i>If 9.3.26 = 0</i> 9.3.27.	<i>If 9.3.26 = 1</i> 9.3.28.	<i>If 9.3.26 = 1</i> 9.3.29.	<i>If 9.3.29 = 9,10,11,12,13</i> 9.3.30.
<b>Invest in inputs for livestock</b> <i>Note: incl. vaccine; medicine; boma strengthening; fishpond or beehive construction</i>	9.3.31.	<i>If 9.3.31 = 0</i> 9.3.32.	<i>If 9.3.31 = 1</i> 9.3.33.	<i>If 9.3.31 = 1</i> 9.3.34.	<i>If 9.3.34 = 9,10,11,12,13</i> 9.3.35.
<b>Invest in local business</b> <i>Note: incl. livestock trade; market stall, shop or tea room; vehicle for transport business</i>	9.3.36.	<i>If 9.3.36 = 0</i> 9.3.37.	<i>If 9.3.36 = 1</i> 9.3.38.	<i>If 9.3.36 = 1</i> 9.3.39.	<i>If 9.3.39 = 9,10,11,12,13</i> 9.3.40.
<b>Invest in family</b> <i>Note: incl. education; health</i>	9.3.41.	<i>If 9.3.41 = 0</i> 9.3.42.	<i>If 9.3.41 = 1</i> 9.3.43.	<i>If 9.3.41 = 1</i> 9.3.44.	<i>If 9.3.44 = 9,10,11,12,13</i> 9.3.45.

<b>Invest in social relations</b> <i>Note: incl. support for friends; distant kin; church</i>	9.3.46.	<i>If 9.3.46 = 0</i> 9.3.47.	<i>If 9.3.46 = 1</i> 9.3.48.	<i>If 9.3.46 = 1</i> 9.3.49.	<i>If 9.3.49 = 9,10,11,12,13</i> 9.3.50.
<b>Invest in a political career</b>	9.3.51.	<i>If 9.3.51 = 0</i> 9.3.52.	<i>If 9.3.51 = 1</i> 9.3.53.	<i>If 9.3.51 = 1</i> 9.3.54.	<i>If 9.3.54 = 9,10,11,12,13</i> 9.3.55.
<b>Save money in bank</b>	9.3.56.	<i>If 9.3.56 = 0</i> 9.3.57.	<i>If 9.3.56 = 1</i> 9.3.58.	<i>If 9.3.56 = 1</i> 9.3.59.	<i>If 9.3.59 = 9,10,11,12,13</i> 9.3.60.
<b>Buy insurance</b>	9.3.61.	<i>If 9.3.61 = 0</i> 9.3.62.	<i>If 9.3.61 = 1</i> 9.3.63.	<i>If 9.3.61 = 1</i> 9.3.64.	<i>If 9.3.64 = 9,10,11,12,13</i> 9.3.65.
<b>Participate in microfinance initiative</b> <i>Note: incl. VICOBA</i>	9.3.66.	<i>If 9.3.66 = 0</i> 9.3.67.	<i>If 9.3.66 = 1</i> 9.3.68.	<i>If 9.3.66 = 1</i> 9.3.69.	<i>If 9.3.69 = 9,10,11,12,13</i> 9.3.70.
<b>Other (please specify)</b>	9.3.71.	<i>If 9.3.71 = 0</i> 9.3.72.	<i>If 9.3.71 = 1</i> 9.3.73.	<i>If 9.3.71 = 1</i> 9.3.74.	<i>If 9.3.74 = 9,10,11,12,13</i> 9.3.75.

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 2: [Select all that apply]

1 = doesn't think it would help; 2 = doesn't have the necessary resources (e.g. money, labour, time);

3 = doesn't have the necessary skills/knowledge; 4 = customary rules prevent it; 5 = village rules prevent it;

6 = WMA rules prevent it; 7 = state rules prevent it; 8 = there is social pressure not to do it;

9 = husband does not allow it; 10 = there are no opportunities to do this;

-7 = refuses to answer; -9 = don't know

Code 3: [Select one option]

0 = not successful at all; 1 = quite successful; 2 = very successful; 3 = variable success;

-7 = refuses to answer; -9 = don't know

Code 4: [Select all that apply]

1 = having sufficient money; 2 = having sufficient family labour or time; 3 = having sufficient land;

4 = having sufficient livestock; 5 = having sufficient access to NTFPs; 6 = having sufficient knowledge/skills;

7 = having sufficient opportunities for alternative income generating activities;

8 = having sufficient availability of inputs (seeds, med, vet, pesticide, fertilizer, fencing etc.);

9 = customary rules; 10 = WMA rules; 11 = village government rules;

12 = rules set by other, non-WMA investors; 13 = national laws; 14 = Intense or repeat disturbances; 15 = Stable

weather; 16 = Having sufficient social capital/ family links; 17 = Economic situation/ market availability;

-7 = refuses to answer; -9 = don't know

Code 5: [Select one option]

1 = supportive; 2 = restrictive;  
 -7 = refuses to answer; -9 = don't know

## Heavy rain

9.4. Are there ever years with very heavy rain?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.4 = "Yes" go to 9.5, otherwise go to 9.13

9.5. Has there been such a year since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

9.6. What problems do they cause?

List problems:

9.7. Do you adopt any special strategies to cope during periods of heavy rain?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.7 = "Yes" go to 9.8, otherwise go to 9.13

9.8. We would like you to tell us what approaches you usually take to help you manage during these periods?

Strategy	Do YOU adopt this strategy? Code 1	If not, why? Code 2	If yes, how successful is it? Code 3	What affects its success? Code 4	If rules, are they supportive or restrictive? Code 5
Change crop types/ varieties grown	9.8.1.	If 9.8.1 = 0 9.8.2.	If 9.8.1 = 1 9.8.3.	If 9.8.1 = 1 9.8.4.	If 9.8.4 = 9,10,11,12,13 9.8.5.
Change livestock types used	9.8.6.	If 9.8.6 = 0 9.8.7.	If 9.8.6 = 1 9.8.8.	If 9.8.6 = 1 9.8.9.	If 9.8.9 = 9,10,11,12,13 9.8.10.

<b>Use additional inputs</b> <i>Note: incl. seeds, pesticide/fertilizer/veterinary medicines</i>	9.8.11.	<i>If 9.8.11 = 0</i> 9.8.12.	<i>If 9.8.11 = 1</i> 9.8.13.	<i>If 9.8.11 = 1</i> 9.8.14.	<i>If 9.8.14 = 9,10,11,12,13</i> 9.8.15.
<b>Farm more land</b>	9.8.16.	<i>If 9.8.16 = 0</i> 9.8.17.	<i>If 9.8.16 = 1</i> 9.8.18.	<i>If 9.8.16 = 1</i> 9.8.19.	<i>If 9.8.19 = 9,10,11,12,13</i> 9.8.20.
<b>Farm less land</b>	9.8.21.	<i>If 9.8.21 = 0</i> 9.8.22.	<i>If 9.8.21 = 1</i> 9.8.23.	<i>If 9.8.21 = 1</i> 9.8.24.	<i>If 9.8.24 = 9,10,11,12,13</i> 9.8.25.
<b>Seek new area outside village lands to farm/ graze/gather</b>	9.8.26.	<i>If 9.8.26 = 0</i> 9.8.27.	<i>If 9.8.26 = 1</i> 9.8.28.	<i>If 9.8.26 = 1</i> 9.8.29.	<i>If 9.8.29 = 9,10,11,12,13</i> 9.8.30.
<b>Seek alternative income/ employment in own village</b>	9.8.31.	<i>If 9.8.31 = 0</i> 9.8.32.	<i>If 9.8.31 = 1</i> 9.8.33.	<i>If 9.8.31 = 1</i> 9.8.34.	<i>If 9.8.34 = 9,10,11,12,13</i> 9.8.35.
<b>Migrate out for alternative livelihood activity</b>	9.8.36.	<i>If 9.8.36 = 0</i> 9.8.37.	<i>If 9.8.36 = 1</i> 9.8.38.	<i>If 9.8.36 = 1</i> 9.8.39.	<i>If 9.8.39 = 9,10,11,12,13</i> 9.8.40.
<b>Call in family members to help with extra work</b>	9.8.41.	<i>If 9.8.41 = 0</i> 9.8.42.	<i>If 9.8.41 = 1</i> 9.8.43.	<i>If 9.8.41 = 1</i> 9.8.44.	<i>If 9.8.44 = 9,10,11,12,13</i> 9.8.45.
<b>Take on additional paid labour</b>	9.8.46.	<i>If 9.8.46 = 0</i> 9.8.47.	<i>If 9.8.46 = 1</i> 9.8.48.	<i>If 9.8.46 = 1</i> 9.8.49.	<i>If 9.8.49 = 9,10,11,12,13</i> 9.8.50.
<b>Sell wild products</b>	9.8.51.	<i>If 9.8.51 = 0</i> 9.8.52.	<i>If 9.8.51 = 1</i> 9.8.53.	<i>If 9.8.51 = 1</i> 9.8.54.	<i>If 9.8.54 = 9,10,11,12,13</i> 9.8.55.
<b>Sell livestock</b>	9.8.56.	<i>If 9.8.56 = 0</i> 9.8.57.	<i>If 9.8.56 = 1</i> 9.8.58.	<i>If 9.8.56 = 1</i> 9.8.59.	<i>If 9.8.59 = 9,10,11,12,13</i> 9.8.60.
<b>Sell land</b>	9.8.61.	<i>If 9.8.61 = 0</i> 9.8.62.	<i>If 9.8.61 = 1</i> 9.8.63.	<i>If 9.8.61 = 1</i> 9.8.64.	<i>If 9.8.64 = 9,10,11,12,13</i> 9.8.65.
<b>Seek WMA support</b>	9.8.66.	<i>If 9.8.66 = 0</i> 9.8.67.	<i>If 9.8.66 = 1</i> 9.8.68.	<i>If 9.8.66 = 1</i> 9.8.69.	<i>If 9.8.69 = 9,10,11,12,13</i> 9.8.70.



<b>Seek aid from family</b> <i>Note: incl. gifts of food, loan of livestock, but not labour which is above</i>	9.8.71.	<i>If 9.8.71 = 0</i> 9.8.72.	<i>If 9.8.71 = 1</i> 9.8.73.	<i>If 9.8.71 = 1</i> 9.8.74.	<i>If 9.8.74 = 9,10,11,12,13</i> 9.8.75.
<b>Seek external aid</b> <i>Note: incl. NGO, church, government</i>	9.8.76.	<i>If 9.8.76 = 0</i> 9.8.77.	<i>If 9.8.76 = 1</i> 9.8.78.	<i>If 9.8.76 = 1</i> 9.8.79.	<i>If 9.8.79 = 9,10,11,12,13</i> 9.8.80.
<b>Other (please specify)</b>	9.8.81.	<i>If 9.8.81 = 0</i> 9.8.82.	<i>If 9.8.81 = 1</i> 9.8.83.	<i>If 9.8.81 = 1</i> 9.8.84.	<i>If 9.8.84 = 9,10,11,12,13</i> 9.8.85.
<b>Seek new area on village land to farm/graze/gather</b>	9.8.86.	<i>If 9.8.86 = 0</i> 9.8.87.	<i>If 9.8.86 = 1</i> 9.8.88.	<i>If 9.8.86 = 1</i> 9.8.89.	<i>If 9.8.89 = 9,10,11,12,13</i> 9.8.90.
<b>Landscaping</b> <i>Note: incl. defences, irrigation</i>	9.8.91.	9.8.92.	9.8.93.	9.8.94.	9.8.95.
<b>Modify cropping strategy</b> <i>Note: incl. replant, early harvest</i>	9.8.96.	9.8.97.	9.8.98.	9.8.99.	9.8.100.

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 2: [Select all that apply]

1 = doesn't think it would help; 2 = doesn't have the necessary resources (e.g. money, labour, time);

3 = doesn't have the necessary skills/knowledge; 4 = customary rules prevent it; 5 = village rules prevent it;

6 = WMA rules prevent it; 7 = state rules prevent it; 8 = there is social pressure not to do it;

9 = husband does not allow it; 10 = there are no opportunities to do this;

-7 = refuses to answer; -9 = don't know

Code 3: [Select one option]

0 = not successful at all; 1 = quite successful; 2 = very successful;

-7 = refuses to answer; -9 = don't know

Code 4: [Select all that apply]

1 = having sufficient money; 2 = having sufficient family labour or time; 3 = having sufficient land;  
4 = having sufficient livestock; 5 = having sufficient access to NTFPs; 6 = having sufficient knowledge/skills;  
7 = having sufficient opportunities for alternative income generating activities;  
8 = having sufficient availability of inputs (seeds, med, vet, pesticide, fertilizer, fencing etc.);  
9 = customary rules; 10 = WMA rules; 11 = village government rules;  
12 = rules set by other, non-WMA investors; 13 = national laws; 14 = Intense or repeat disturbances; 15 = Stable weather; 16= Having sufficient social capital/ family links; 17 = Economic situation/ market availability;

-7 = refuses to answer; -9 = don't know

Code 5: [Select one option]

1 = supportive; 2 = restrictive;  
-7 = refuses to answer; -9 = don't know

If 9.8.1 = "Yes":

9.9. Which crop types do you use less or stop using?

Code 1:

Code 1: [Select all that apply]

1 = maize; 2 = peas; 3 = beans; 4 = rice; 5 = millet; 6 = cassava; 7 = fruits; 8 = vegetables; 9 = sesame/sunflower;  
10 = non-food crops (tobacco or cotton); 11 = improved varieties;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.8.1 = "Yes":

9.10. Which crop types do you use more or start using?

Code 1:

Code 1: [Select all that apply]

1 = maize; 2 = peas; 3 = beans; 4 = rice; 5 = millet; 6 = cassava; 7 = fruits; 8 = vegetables; 9 = sesame/sunflower;  
10 = non-food crops (tobacco or cotton); 11 = improved varieties;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.8.6 = "Yes":

9.11. Which livestock types do you use less or stop using?

Code 1:

Code 1: [Select all that apply]

1 = cattle; 2 = goats; 3 = sheep; 4 = donkeys/mules; 5 = pigs; 6 = fishponds; 7 = beehives; 8 = improved breeds;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.8.6 = "Yes":

9.12. Which livestock types do you use more or start using?

Code 1:

Code 1: [Select all that apply]

1 = cattle; 2 = goats; 3 = sheep; 4 = donkeys/mules; 5 = pigs; 6 = fishponds; 7 = beehives; 8 = improved breeds;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

**Low rain**

9.13. Are there ever years with very low rain?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.13 = "Yes" go to 9.14, otherwise go to 9.22

9.14. Has there been such a year since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

9.15. What problems do they cause?

List problems:

9.16. Do you adopt any special strategies to cope during periods of low rain?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.16 = "Yes" go to 9.17, otherwise go to 9.22

9.17. We would like you to tell us what approaches you usually take to help you manage during these periods?

Strategy	Do YOU adopt this strategy? Code 1	If not, why? Code 2	If yes, how successful is it? Code 3	What affects its success? Code 4	If rules, are they supportive or restrictive? Code 5
Change crop types/ varieties grown	9.17.1.	If 9.17.1 = 0 9.17.2.	If 9.17.1 = 1 9.17.3.	If 9.17.1 = 1 9.17.4.	If 9.17.4 = 9,10,11,12,13 9.17.5.
Change livestock types used	9.17.6.	If 9.17.6 = 0 9.17.7.	If 9.17.6 = 1 9.17.8.	If 9.17.6 = 1 9.17.9.	If 9.17.9 = 9,10,11,12,13 9.17.10.
Use additional inputs <i>Note: incl. seeds, pesticide/fertilizer/veterinary medicines</i>	9.17.11.	If 9.17.11 = 0 9.17.12.	If 9.17.11 = 1 9.17.13.	If 9.17.11 = 1 9.17.14.	If 9.17.14 = 9,10,11,12,13 9.17.15.
Farm more land	9.17.16.	If 9.17.16 = 0 9.17.17.	If 9.17.16 = 1 9.17.18.	If 9.17.16 = 1 9.17.19.	If 9.17.19 = 9,10,11,12,13 9.17.20.

<b>Farm less land</b>	9.17.21.	<i>If 9.17.21 = 0</i> 9.17.22.	<i>If 9.17.21 = 1</i> 9.17.23.	<i>If 9.17.21 = 1</i> 9.17.24.	<i>If 9.17.24 = 9,10,11,12,13</i> 9.17.25.
<b>Seek new area outside village lands to farm/ graze/gather</b>	9.17.26.	<i>If 9.17.26 = 0</i> 9.17.27.	<i>If 9.17.26 = 1</i> 9.17.28.	<i>If 9.17.26 = 1</i> 9.17.29.	<i>If 9.17.29 = 9,10,11,12,13</i> 9.17.30.
<b>Seek alternative income/ employment in own village</b>	9.17.31.	<i>If 9.17.31 = 0</i> 9.17.32.	<i>If 9.17.31 = 1</i> 9.17.33.	<i>If 9.17.31 = 1</i> 9.17.34.	<i>If 9.17.34 = 9,10,11,12,13</i> 9.17.35.
<b>Migrate out for alternative livelihood activity</b>	9.17.36.	<i>If 9.17.36 = 0</i> 9.17.37.	<i>If 9.17.36 = 1</i> 9.17.38.	<i>If 9.17.36 = 1</i> 9.17.39.	<i>If 9.17.39 = 9,10,11,12,13</i> 9.17.40.
<b>Call in family members to help with extra work</b>	9.17.41.	<i>If 9.17.41 = 0</i> 9.17.42.	<i>If 9.17.41 = 1</i> 9.17.43.	<i>If 9.17.41 = 1</i> 9.17.44.	<i>If 9.17.44 = 9,10,11,12,13</i> 9.17.45.
<b>Take on additional paid labour</b>	9.17.46.	<i>If 9.17.46 = 0</i> 9.17.47.	<i>If 9.17.46 = 1</i> 9.17.48.	<i>If 9.17.46 = 1</i> 9.17.49.	<i>If 9.17.49 = 9,10,11,12,13</i> 9.17.50.
<b>Sell wild products</b>	9.17.51.	<i>If 9.17.51 = 0</i> 9.17.52.	<i>If 9.17.51 = 1</i> 9.17.53.	<i>If 9.17.51 = 1</i> 9.17.54.	<i>If 9.17.54 = 9,10,11,12,13</i> 9.17.55.
<b>Sell livestock</b>	9.17.56.	<i>If 9.17.56 = 0</i> 9.17.57.	<i>If 9.17.56 = 1</i> 9.17.58.	<i>If 9.17.56 = 1</i> 9.17.59.	<i>If 9.17.59 = 9,10,11,12,13</i> 9.17.60.
<b>Sell land</b>	9.17.61.	<i>If 9.17.61 = 0</i> 9.17.62.	<i>If 9.17.61 = 1</i> 9.17.63.	<i>If 9.17.61 = 1</i> 9.17.64.	<i>If 9.17.64 = 9,10,11,12,13</i> 9.17.65.
<b>Seek WMA support</b>	9.17.66.	<i>If 9.17.66 = 0</i> 9.17.67.	<i>If 9.17.66 = 1</i> 9.17.68.	<i>If 9.17.66 = 1</i> 9.17.69.	<i>If 9.17.69 = 9,10,11,12,13</i> 9.17.70.
<b>Seek aid from family</b> <i>Note: incl. gifts of food, loan of livestock, but not labour which is above</i>	9.17.71.	<i>If 9.17.71 = 0</i> 9.17.72.	<i>If 9.17.71 = 1</i> 9.17.73.	<i>If 9.17.71 = 1</i> 9.17.74.	<i>If 9.17.74 = 9,10,11,12,13</i> 9.17.75.
<b>Seek external aid</b> <i>Note: incl. NGO, church, government</i>	9.17.76.	<i>If 9.17.76 = 0</i> 9.17.77.	<i>If 9.17.76 = 1</i> 9.17.78.	<i>If 9.17.76 = 1</i> 9.17.79.	<i>If 9.17.79 = 9,10,11,12,13</i> 9.17.80.

<b>Other (please specify)</b>	9.17.81.	<i>If 9.8.81 = 0</i> 9.17.82.	<i>If 9.8.81 = 1</i> 9.17.83.	<i>If 9.8.81 = 1</i> 9.17.84.	<i>If 9.8.84 = 9,10,11,12,13</i> 9.17.85.
<b>Seek new area on village land to farm/graze/gather</b>	9.17.86.	<i>If 9.17.86 = 0</i> 9.17.87.	<i>If 9.17.86 = 1</i> 9.17.88.	<i>If 9.17.86 = 1</i> 9.17.89.	<i>If 9.17.89 = 9,10,11,12,13</i> 9.17.90.
<b>Landscaping</b> <i>Note: incl. defences, irrigation</i>	9.17.91.	9.17.92.	9.17.93.	9.17.94.	9.17.95.
<b>Modify cropping strategy</b> <i>Note: incl. replant, early harvest</i>	9.17.96.	9.17.97.	9.17.98.	9.17.99.	9.17.100.

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 2: [Select all that apply]

1 = doesn't think it would help; 2 = doesn't have the necessary resources (e.g. money, labour, time);

3 = doesn't have the necessary skills/knowledge; 4 = customary rules prevent it; 5 = village rules prevent it;

6 = WMA rules prevent it; 7 = state rules prevent it; 8 = there is social pressure not to do it;

9 = husband does not allow it; 10 = there are no opportunities to do this;

-7 = refuses to answer; -9 = don't know

Code 3: [Select one option]

0 = not successful at all; 1 = quite successful; 2 = very successful;

-7 = refuses to answer; -9 = don't know

Code 4: [Select all that apply]

1 = having sufficient money; 2 = having sufficient family labour or time; 3 = having sufficient land;

4 = having sufficient livestock; 5 = having sufficient access to NTFPs; 6 = having sufficient knowledge/skills;

7 = having sufficient opportunities for alternative income generating activities;

8 = having sufficient availability of inputs (seeds, med, vet, pesticide, fertilizer, fencing etc.);

9 = customary rules; 10 = WMA rules; 11 = village government rules;

12 = rules set by other, non-WMA investors; 13 = national laws; 14 = Intense or repeat disturbances; 15 = Stable weather; 16 = Having sufficient social capital/ family links; 17 = Economic situation/ market availability;

-7 = refuses to answer; -9 = don't know

-7 = refuses to answer; -9 = don't know

Code 5: [Select one option]

1 = supportive; 2 = restrictive;

-7 = refuses to answer; -9 = don't know

If 9.17.1 = "Yes"

9.18. Which crop types do you use less or stop using?

Code 1:

Code 1: [Select all that apply]

1 = maize; 2 = peas; 3 = beans; 4 = rice; 5 = millet; 6 = cassava; 7 = fruits; 8 = vegetables; 9 = sesame/sunflower; 10 = non-food crops (tobacco or cotton); 11 = improved varieties; 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.17.1 = "Yes"

9.19. Which crop types do you use more or start using?

Code 1:

Code 1: [Select all that apply]

1 = maize; 2 = peas; 3 = beans; 4 = rice; 5 = millet; 6 = cassava; 7 = fruits; 8 = vegetables; 9 = sesame/sunflower; 10 = non-food crops (tobacco or cotton); 11 = improved varieties; 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.17.6 = "Yes"

9.20. Which livestock types do you use less or stop using?

Code 1:

Code 1: [Select all that apply]

1 = cattle; 2 = goats; 3 = sheep; 4 = donkeys/mules; 5 = pigs; 6 = fishponds; 7 = beehives; 8 = improved breeds; 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.17.6 = "Yes"

9.21. Which livestock types do you use more or start using?

Code 1:

Code 1: [Select all that apply]

1 = cattle; 2 = goats; 3 = sheep; 4 = donkeys/mules; 5 = pigs; 6 = fishponds; 7 = beehives; 8 = improved breeds; 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

## Rain falling at unexpected times

9.22. Are there ever years when rain comes at unexpected times?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes; -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.22 = "Yes" go to 9.23, otherwise go to 9.31

9.23. Has there been such a year since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes; -7 = refuses to answer; -8 = does not apply; -9 = don't know

9.24. What problems do they cause?

List problems:

9.25. Do you adopt any special strategies to cope during years when rain comes at unexpected times?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.25 = "Yes" go to 9.26, otherwise go to 9.31

9.26. We would like you to tell us what approaches you usually take to help you manage during these periods?

Strategy	Do YOU adopt this strategy? Code 1	If not, why? Code 2	If yes, how successful is it? Code 3	What affects its success? Code 4	If rules, are they supportive or restrictive? Code 5
Change crop types/ varieties grown	9.26.1.	If 9.26.1 = 0 9.26.2.	If 9.26.1 = 1 9.26.3.	If 9.26.1 = 1 9.26.4.	If 9.26.4 = 9,10,11,12,13 9.26.5.
Change livestock types used	9.26.6.	If 9.26.6 = 0 9.26.7.	If 9.26.6 = 1 9.26.8.	If 9.26.6 = 1 9.26.9.	If 9.26.9 = 9,10,11,12,13 9.26.10.
Use additional inputs <i>Note: incl. seeds, pesticide/fertilizer/veterinary medicines</i>	9.26.11.	If 9.26.11 = 0 9.26.12.	If 9.26.11 = 1 9.26.13.	If 9.26.11 = 1 9.26.14.	If 9.26.14 = 9,10,11,12,13 9.26.15.
Farm more land	9.26.16.	If 9.26.16 = 0 9.26.17.	If 9.26.16 = 1 9.26.18.	If 9.26.16 = 1 9.26.19.	If 9.26.19 = 9,10,11,12,13 9.26.20.
Farm less land	9.26.21.	If 9.26.21 = 0 9.26.22.	If 9.26.21 = 1 9.26.23.	If 9.26.21 = 1 9.26.24.	If 9.26.24 = 9,10,11,12,13 9.26.25.
Seek new area outside village lands to farm/ graze/gather	9.26.26.	If 9.26.26 = 0 9.26.27.	If 9.26.26 = 1 9.26.28.	If 9.26.26 = 1 9.26.29.	If 9.26.29 = 9,10,11,12,13 9.26.30.
Seek alternative income/ employment in own village	9.26.31.	If 9.26.31 = 0 9.26.32.	If 9.26.31 = 1 9.26.33.	If 9.26.31 = 1 9.26.34.	If 9.26.34 = 9,10,11,12,13 9.26.35.
Migrate out for alternative livelihood activity	9.26.36.	If 9.26.36 = 0 9.26.37.	If 9.26.36 = 1 9.26.38.	If 9.26.36 = 1 9.26.39.	If 9.26.39 = 9,10,11,12,13 9.26.40.

<b>Call in family members to help with extra work</b>	9.26.41.	<i>If 9.26.41 = 0</i> 9.26.42.	<i>If 9.26.41 = 1</i> 9.26.43.	<i>If 9.26.41 = 1</i> 9.26.44.	<i>If 9.26.44 = 9,10,11,12,13</i> 9.26.45.
<b>Take on additional paid labour</b>	9.26.46.	<i>If 9.26.46 = 0</i> 9.26.47.	<i>If 9.26.46 = 1</i> 9.26.48.	<i>If 9.26.46 = 1</i> 9.26.49.	<i>If 9.26.49 = 9,10,11,12,13</i> 9.26.50.
<b>Sell wild products</b>	9.26.51.	<i>If 9.26.51 = 0</i> 9.26.52.	<i>If 9.26.51 = 1</i> 9.26.53.	<i>If 9.26.51 = 1</i> 9.26.54.	<i>If 9.26.54 = 9,10,11,12,13</i> 9.26.55.
<b>Sell livestock</b>	9.26.56.	<i>If 9.26.56 = 0</i> 9.26.57.	<i>If 9.26.56 = 1</i> 9.26.58.	<i>If 9.26.56 = 1</i> 9.26.59.	<i>If 9.26.59 = 9,10,11,12,13</i> 9.26.60.
<b>Sell land</b>	9.26.61.	<i>If 9.26.61 = 0</i> 9.26.62.	<i>If 9.26.61 = 1</i> 9.26.63.	<i>If 9.26.61 = 1</i> 9.26.64.	<i>If 9.26.64 = 9,10,11,12,13</i> 9.26.65.
<b>Seek WMA support</b>	9.26.66.	<i>If 9.26.66 = 0</i> 9.26.67.	<i>If 9.26.66 = 1</i> 9.26.68.	<i>If 9.26.66 = 1</i> 9.26.69.	<i>If 9.26.69 = 9,10,11,12,13</i> 9.26.70.
<b>Seek aid from family</b> <i>Note: incl. gifts of food, loan of livestock, but not labour which is above</i>	9.26.71.	<i>If 9.26.71 = 0</i> 9.26.72.	<i>If 9.26.71 = 1</i> 9.26.73.	<i>If 9.26.71 = 1</i> 9.26.74.	<i>If 9.26.74 = 9,10,11,12,13</i> 9.26.75.
<b>Seek external aid</b> <i>Note: incl. NGO, church, government</i>	9.26.76.	<i>If 9.26.76 = 0</i> 9.26.77.	<i>If 9.26.76 = 1</i> 9.26.78.	<i>If 9.26.76 = 1</i> 9.26.79.	<i>If 9.26.79 = 9,10,11,12,13</i> 9.26.80.
<b>Other (please specify)</b>	9.26.81.	<i>If 9.8.81 = 0</i> 9.26.82.	<i>If 9.8.81 = 1</i> 9.26.83.	<i>If 9.8.81 = 1</i> 9.26.84.	<i>If 9.8.84 = 9,10,11,12,13</i> 9.26.85.
<b>Seek new area on village land to farm/graze/gather</b>	9.26.86.	<i>If 9.26.86 = 0</i> 9.26.87.	<i>If 9.26.86 = 1</i> 9.26.88.	<i>If 9.26.86 = 1</i> 9.26.89.	<i>If 9.26.89 = 9,10,11,12,13</i> 9.26.90.
<b>Landscaping</b> <i>Note: incl. defences, irrigation</i>	9.26.91.	9.26.92.	9.26.93.	9.26.94.	9.26.95.
<b>Modify cropping strategy</b> <i>Note: incl. replant, early harvest</i>	9.26.96.	9.26.97.	9.26.98.	9.26.99.	9.26.100.



Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 2: [Select all that apply]

1 = doesn't think it would help; 2 = doesn't have the necessary resources (e.g. money, labour, time);

3 = doesn't have the necessary skills/knowledge; 4 = customary rules prevent it; 5 = village rules prevent it;

6 = WMA rules prevent it; 7 = state rules prevent it; 8 = there is social pressure not to do it;

9 = husband does not allow it; 10 = there are no opportunities to do this;

-7 = refuses to answer; -9 = don't know

Code 3: [Select one option]

0 = not successful at all; 1 = quite successful; 2 = very successful;

-7 = refuses to answer; -9 = don't know

Code 4: [Select all that apply]

1 = having sufficient money; 2 = having sufficient family labour or time; 3 = having sufficient land;

4 = having sufficient livestock; 5 = having sufficient access to NTFPs; 6 = having sufficient knowledge/skills;

7 = having sufficient opportunities for alternative income generating activities;

8 = having sufficient availability of inputs (seeds, med, vet, pesticide, fertilizer, fencing etc.);

9 = customary rules; 10 = WMA rules; 11 = village government rules;

12 = rules set by other, non-WMA investors; 13 = national laws; 14 = Intense or repeat disturbances; 15 = Stable

weather; 16 = Having sufficient social capital/ family links; 17 = Economic situation/ market availability;

-7 = refuses to answer; -9 = don't know

Code 5: [Select one option]

1 = supportive; 2 = restrictive;

-7 = refuses to answer; -9 = don't know

If 9.26.1 = "Yes"

9.27. Which crop types do you use less or stop using?

Code 1:

Code 1: [Select all that apply]

1 = maize; 2 = peas; 3 = beans; 4 = rice; 5 = millet; 6 = cassava; 7 = fruits; 8 = vegetables; 9 = sesame/sunflower;

10 = non-food crops (tobacco or cotton); 11 = improved varieties;

30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.26.1 = "Yes"

9.28. Which crop types do you use more or start using?

Code 1:

Code 1: [Select all that apply]

1 = maize; 2 = peas; 3 = beans; 4 = rice; 5 = millet; 6 = cassava; 7 = fruits; 8 = vegetables; 9 = sesame/sunflower;

10 = non-food crops (tobacco or cotton); 11 = improved varieties;

30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.26.6 = "Yes"

9.29. Which livestock types do you use less or stop using?

Code 1:

Code 1: [Select all that apply]

1 = cattle; 2 = goats; 3 = sheep; 4 = donkeys/mules; 5 = pigs; 6 = fishponds; 7 = beehives; 8 = improved breeds;

30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.26.6 = "Yes"

9.30. Which livestock types do you use more or start using?

Code 1:

Code 1: [Select all that apply]

1 = cattle; 2 = goats; 3 = sheep; 4 = donkeys/mules; 5 = pigs; 6 = fishponds; 7 = beehives; 8 = improved breeds; 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

### Other extreme climatic events

9.31. Are there ever years with other extreme climatic events, such as very high or very low temperatures or very high winds?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.31 = "Yes" go to 9.32, otherwise go to **Error! Reference source not found.**

9.32. Has there been such a year since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

9.33. What problems do they cause?

List problems:

9.34. Do you adopt any special strategies to cope during periods of very high or very low temperatures or very high winds?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.34 = "Yes" go to 9.35, otherwise go to **Error! Reference source not found.**

9.35. We would like you to tell us what approaches you usually take to help you manage during these periods?

Strategy	Do YOU adopt this strategy? Code 1	If not, why? Code 2	If yes, how successful is it? Code 3	What affects its success? Code 4	If rules, are they supportive or restrictive? Code 5
Change crop types/ varieties grown	9.35.1.	If 9.35.1 = 0 9.35.2.	If 9.35.1 = 1 9.35.3.	If 9.35.1 = 1 9.35.4.	If 9.35.4 = 9,10,11,12,13 9.35.5.

<b>Change livestock types used</b>	9.35.6.	<i>If 9.35.6 = 0</i> 9.35.7.	<i>If 9.35.6 = 1</i> 9.35.8.	<i>If 9.35.6 = 1</i> 9.35.9.	<i>If 9.35.9 = 9,10,11,12,13</i> 9.35.10.
<b>Use additional inputs</b> <i>Note: incl. seeds, pesticide/fertilizer/veterinary medicines</i>	9.35.11.	<i>If 9.35.11 = 0</i> 9.35.12.	<i>If 9.35.11 = 1</i> 9.35.13.	<i>If 9.35.11 = 1</i> 9.35.14.	<i>If 9.35.14 = 9,10,11,12,13</i> 9.35.15.
<b>Farm more land</b>	9.35.16.	<i>If 9.35.16 = 0</i> 9.35.17.	<i>If 9.35.16 = 1</i> 9.35.18.	<i>If 9.35.16 = 1</i> 9.35.19.	<i>If 9.35.19 = 9,10,11,12,13</i> 9.35.20.
<b>Farm less land</b>	9.35.21.	<i>If 9.35.21 = 0</i> 9.35.22.	<i>If 9.35.21 = 1</i> 9.35.23.	<i>If 9.35.21 = 1</i> 9.35.24.	<i>If 9.35.24 = 9,10,11,12,13</i> 9.35.25.
<b>Seek new area outside village lands to farm/ graze/gather</b>	9.35.26.	<i>If 9.35.26 = 0</i> 9.35.27.	<i>If 9.35.26 = 1</i> 9.35.28.	<i>If 9.35.26 = 1</i> 9.35.29.	<i>If 9.35.29 = 9,10,11,12,13</i> 9.35.30.
<b>Seek alternative income/ employment in own village</b>	9.35.31.	<i>If 9.35.31 = 0</i> 9.35.32.	<i>If 9.35.31 = 1</i> 9.35.33.	<i>If 9.35.31 = 1</i> 9.35.34.	<i>If 9.35.34 = 9,10,11,12,13</i> 9.35.35.
<b>Migrate out for alternative livelihood activity</b>	9.35.36.	<i>If 9.35.36 = 0</i> 9.35.37.	<i>If 9.35.36 = 1</i> 9.35.38.	<i>If 9.35.36 = 1</i> 9.35.39.	<i>If 9.35.39 = 9,10,11,12,13</i> 9.35.40.
<b>Call in family members to help with extra work</b>	9.35.41.	<i>If 9.35.41 = 0</i> 9.35.42.	<i>If 9.35.41 = 1</i> 9.35.43.	<i>If 9.35.41 = 1</i> 9.35.44.	<i>If 9.35.44 = 9,10,11,12,13</i> 9.35.45.
<b>Take on additional paid labour</b>	9.35.46.	<i>If 9.35.46 = 0</i> 9.35.47.	<i>If 9.35.46 = 1</i> 9.35.48.	<i>If 9.35.46 = 1</i> 9.35.49.	<i>If 9.35.49 = 9,10,11,12,13</i> 9.35.50.
<b>Sell wild products</b>	9.35.51.	<i>If 9.35.51 = 0</i> 9.35.52.	<i>If 9.35.51 = 1</i> 9.35.53.	<i>If 9.35.51 = 1</i> 9.35.54.	<i>If 9.35.54 = 9,10,11,12,13</i> 9.35.55.
<b>Sell livestock</b>	9.35.56.	<i>If 9.35.56 = 0</i> 9.35.57.	<i>If 9.35.56 = 1</i> 9.35.58.	<i>If 9.35.56 = 1</i> 9.35.59.	<i>If 9.35.59 = 9,10,11,12,13</i> 9.35.60.
<b>Sell land</b>	9.35.61.	<i>If 9.35.61 = 0</i> 9.35.62.	<i>If 9.35.61 = 1</i> 9.35.63.	<i>If 9.35.61 = 1</i> 9.35.64.	<i>If 9.35.64 = 9,10,11,12,13</i> 9.35.65.

<b>Seek WMA support</b>	9.35.66.	<i>If 9.35.66 = 0</i> 9.35.67.	<i>If 9.35.66 = 1</i> 9.35.68.	<i>If 9.35.66 = 1</i> 9.35.69.	<i>If 9.35.69 = 9,10,11,12,13</i> 9.35.70.
<b>Seek aid from family</b> <i>Note: incl. gifts of food, loan of livestock, but not labour which is above</i>	9.35.71.	<i>If 9.35.71 = 0</i> 9.35.72.	<i>If 9.35.71 = 1</i> 9.35.73.	<i>If 9.35.71 = 1</i> 9.35.74.	<i>If 9.35.74 = 9,10,11,12,13</i> 9.35.75.
<b>Seek external aid</b> <i>Note: incl. NGO, church, government</i>	9.35.76.	<i>If 9.35.76 = 0</i> 9.35.77.	<i>If 9.35.76 = 1</i> 9.35.78.	<i>If 9.35.76 = 1</i> 9.35.79.	<i>If 9.35.79 = 9,10,11,12,13</i> 9.35.80.
<b>Other (please specify)</b>	9.35.81.	<i>If 9.8.81 = 0</i> 9.35.82.	<i>If 9.8.81 = 1</i> 9.35.83.	<i>If 9.8.81 = 1</i> 9.35.84.	<i>If 9.8.84 = 9,10,11,12,13</i> 9.35.85.
<b>Seek new area on village land to farm/graze/gather</b>	9.35.86.	<i>If 9.35.86 = 0</i> 9.35.87.	<i>If 9.35.86 = 1</i> 9.35.88.	<i>If 9.35.86 = 1</i> 9.35.89.	<i>If 9.35.89 = 9,10,11,12,13</i> 9.35.90.
<b>Landscaping</b> <i>Note: incl. defences, irrigation</i>	9.35.91.	9.35.92.	9.35.93.	9.35.94.	9.35.95.
<b>Modify cropping strategy</b> <i>Note: incl. replant, early harvest</i>	9.35.96.	9.35.97.	9.35.98.	9.35.99.	9.35.100.

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 2: [Select all that apply]

1 = doesn't think it would help; 2 = doesn't have the necessary resources (e.g. money, labour, time);

3 = doesn't have the necessary skills/knowledge; 4 = customary rules prevent it; 5 = village rules prevent it;

6 = WMA rules prevent it; 7 = state rules prevent it; 8 = there is social pressure not to do it;

9 = husband does not allow it; 10 = there are no opportunities to do this;

-7 = refuses to answer; -9 = don't know

Code 3: [Select one option]

0 = not successful at all; 1 = quite successful; 2 = very successful;

-7 = refuses to answer; -9 = don't know

Code 4: [Select all that apply]

1 = having sufficient money; 2 = having sufficient family labour or time; 3 = having sufficient land;  
4 = having sufficient livestock; 5 = having sufficient access to NTFPs; 6 = having sufficient knowledge/skills;  
7 = having sufficient opportunities for alternative income generating activities;  
8 = having sufficient availability of inputs (seeds, med, vet, pesticide, fertilizer, fencing etc.);  
9 = customary rules; 10 = WMA rules; 11 = village government rules;  
12 = rules set by other, non-WMA investors; 13 = national laws; 14 = Intense or repeat disturbances; 15 = Stable weather; 16= Having sufficient social capital/ family links; 17 = Economic situation/ market availability;

-7 = refuses to answer; -9 = don't know

Code 5: [Select one option]

1 = supportive; 2 = restrictive;

-7 = refuses to answer; -9 = don't know

If 9.35.1 = "Yes"

9.36. Which crop types do you use less or stop using?

Code 1:

Code 1: [Select all that apply]

1 = maize; 2 = peas; 3 = beans; 4 = rice; 5 = millet; 6 = cassava; 7 = fruits; 8 = vegetables; 9 = sesame/sunflower;  
10 = non-food crops (tobacco or cotton); 11 = improved varieties;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.35.1 = "Yes"

9.37. Which crop types do you use more or start using?

Code 1:

Code 1: [Select all that apply]

1 = maize; 2 = peas; 3 = beans; 4 = rice; 5 = millet; 6 = cassava; 7 = fruits; 8 = vegetables; 9 = sesame/sunflower;  
10 = non-food crops (tobacco or cotton); 11 = improved varieties;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.35.6 = "Yes"

9.38. Which livestock types do you use less or stop using?

Code 1:

Code 1: [Select all that apply]

1 = cattle; 2 = goats; 3 = sheep; 4 = donkeys/mules; 5 = pigs; 6 = fishponds; 7 = beehives; 8 = improved breeds;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 9.35.6 = "Yes"

9.39. Which livestock types do you use more or start using?

Code 1:

Code 1: [Select all that apply]

1 = cattle; 2 = goats; 3 = sheep; 4 = donkeys/mules; 5 = pigs; 6 = fishponds; 7 = beehives; 8 = improved breeds;  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

## 10. Access to natural resources

*Note: In the following we talk about ACCESS in terms of being able to go into locations where the relevant resources are available. Hence we are not enquiring about change in abundance of resources as such.*

10.1. How do you see ACCESS to the following natural resources for yourself and your subhousehold/*aji* dependents now compared to 2014?

*Note [ENUMERATOR]: Please ask about each of the items on the list*

Resource	How has your and other homestead members' ACCESS to this resource changed from 2014 to NOW? <i>Code 1</i>	What has changed to cause this? <i>Code 2</i>
Land for new settlement sites	10.1.1.	<i>If 10.1.1 = 1,2,4,5</i> 10.1.2.
Land for cultivation	10.1.3.	<i>If 10.1.3 = 1,2,4,5</i> 10.1.4.
Firewood	10.1.5.	<i>If 10.1.5 = 1,2,4,5</i> 10.1.6.
Water <i>Note: Out in the wild, not at a village water point</i>	10.1.7.	<i>If 10.1.7 = 1,2,4,5</i> 10.1.8.
Construction materials	10.1.9.	<i>If 10.1.9 = 1,2,4,5</i> 10.1.10.

*Code 1: [Select one option]*

*1 = much worse; 2 = worse; 3 = no change; 4 = better; 5 = much better;  
-7 = refuses to answer; -8 = does not apply; -9 = don't know*

*Code 2: [Select all that apply]*

*1 = change in WMA rules; 2 = change in customary rules; 3 = change in village rules;  
4 = new arrangement with non-WMA -investor; 6 = change in state rules (NP/Corridor/GCA / GR etc.);  
30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know*

## 11. Freedom of movement and safety

11.1. How do you see freedom/ease of movement for yourself and your dependents now compared to 2014? (e.g. for children to go out to herd, for her to go to the bush to collect NRs; through-passage to visit friends, family, markets?)

*Code 1:*

*Code 1: [Select one option]*

*1 = much worse; 2 = worse; 3 = no change; 4 = better; 5 = much better;  
-7 = refuses to answer; -8 = does not apply; -9 = don't know*

*If 11.1 = 1,2,4,5*

11.2. What was the main cause of this change? Change perceived by the respondent to be related to:

*Code 1:*

*Code 1: [Select all that apply]*

*1 = change in WMA rules; 2 = change in customary rules; 3 = change in village rules;*

4 = new arrangement with non-WMA investor; 5 = change in state rules (NP/Corridor/GCA / GR etc.);  
 6 = change in wildlife behaviour; 7 = change in abundance of wildlife;  
 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

11.3. Do you worry about larger wildlife for the safety for yourself and your dependents? Do you worry NOW more or less compared to 2014?

Code 1:

Code 1: [Select one option]

0 = no worry from 2014 to now; 1 = much more; 2 = more; 3 = no change; 4 = less; 5 = much less;  
 -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 0 = 1,2,4,5

11.4. What was the main cause of this change? Change perceived by the respondent to be related to:

Code 1:

Code 1: [Select all that apply]

1 = change in WMA rules; 2 = change in customary rules; 3 = change in village rules;  
 4 = new arrangement with non-WMA investor; 5 = change in state rules (NP/Corridor/GCA / GR etc.);  
 6 = change in wildlife behaviour; 7 = change in abundance of wildlife;  
 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

## 12. Conflict between villages and between people in this village

### Conflict with other villages over natural resources

12.1. Has any member of your household been in conflict with MEMBERS OF OTHER VILLAGES regarding NATURAL RESOURCES-related issues since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;  
 -7 = refuses to answer; -8 = does not apply; -9 = don't know.

If 12.1 = "Yes":

12.2. Please tell us about these conflicts.

Resource	Has conflict occurred over this resource? Code 1	What form has the conflict taken? Code 2	Which authorities do people look to to resolve these conflicts? Code 3	Have the FREQUENCY of these conflicts changed from 2014 to now? Code 4	Have the SEVERITY of these conflicts changed from 2014 to now? Code 4
Water for people	12.2.1.	If 12.2.1 = 1 12.2.2.	If 12.2.1 = 1 12.2.3.	If 12.2.1 = 1 12.2.4.	If 12.2.1 = 1 12.2.5.
Water for livestock	12.2.6.	If 12.2.6 = 1 12.2.7.	If 12.2.6 = 1 12.2.8.	If 12.2.6 = 1 12.2.9.	If 12.2.6 = 1 12.2.10.
Farming land	12.2.11.	If 12.2.11 = 1 12.2.12.	If 12.2.11 = 1 12.2.13.	If 12.2.11 = 1 12.2.14.	If 12.2.11 = 1 12.2.15.
Grazing land	12.2.16.	If 12.2.16 = 1 12.2.17.	If 12.2.16 = 1 12.2.18.	If 12.2.16 = 1 12.2.19.	If 12.2.16 = 1 12.2.20.

<b>Fishponds</b>	12.2.21.	<i>If 12.2.21 = 1</i> 12.2.22.	<i>If 12.2.21 = 1</i> 12.2.23.	<i>If 12.2.21 = 1</i> 12.2.24.	<i>If 12.2.21 = 1</i> 12.2.25.
<b>Beehives</b>	12.2.26.	<i>If 12.2.26 = 1</i> 12.2.27.	<i>If 12.2.26 = 1</i> 12.2.28.	<i>If 12.2.26 = 1</i> 12.2.29.	<i>If 12.2.26 = 1</i> 12.2.30.
<b>Timber</b>	12.2.31.	<i>If 12.2.31 = 1</i> 12.2.32.	<i>If 12.2.31 = 1</i> 12.2.33.	<i>If 12.2.31 = 1</i> 12.2.34.	<i>If 12.2.31 = 1</i> 12.2.35.
<b>NTFPs*</b>	12.2.36.	<i>If 12.2.36 = 1</i> 12.2.37.	<i>If 12.2.36 = 1</i> 12.2.38.	<i>If 12.2.36 = 1</i> 12.2.39.	<i>If 12.2.36 = 1</i> 12.2.40.

\* *Note: NTFPs = non-timber forest products, and includes medicinal plants, wild fish, wild honey, firewood, charcoal, thatch, poles and rope.*

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know.

Code 2: [Select all that apply]

1 = trespass; 2 = theft; 3 = threats; 4 = damage to resource; 5 = attacks on self/members of homestead; 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 3: [Select all that apply]

1 = village government; 2 = district government; 3 = national government; 4 = WMA;

5 = village natural resource committee; 6 = police;

30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

Code 4: [Select one option]

1 = much less frequent; 2 = less frequent; 3 = no change; 4 = more frequent; 5 = much more frequent;

-7 = refuses to answer; -8 = does not apply; -9 = don't know.

Code 5: [Select one option]

1 = much less serious; 2 = less serious; 3 = no change; 4 = more serious; 5 = much more serious;

-7 = refuses to answer; -8 = does not apply; -9 = don't know.

## Conflict between people living in this village over natural resources

12.3. Has any member of your household been in conflict with OTHER PEOPLE IN THIS VILLAGE regarding NATURAL RESOURCES-related issues since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes;

-7 = refuses to answer; -8 = does not apply; -9 = don't know.

*If 12.3 = "Yes":*

12.4. Please tell us about these conflicts.

<b>Resource</b>	<b>Has conflict occurred over this resource?</b> <i>Code 1</i>	<b>What form has the conflict taken?</b> <i>Code 2</i>	<b>Which authorities do people look to to resolve these conflicts?</b> <i>Code 3</i>	<b>Have the FREQUENCY of these conflicts changed from 2014 to now?</b> <i>Code 4</i>	<b>Have the SEVERITY of these conflicts changed from 2014 to now?</b> <i>Code 4</i>
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<b>Water for people</b>	12.4.1.	<i>If 12.4.1 = 1</i> 12.4.2.	<i>If 12.4.1 = 1</i> 12.4.3.	<i>If 12.4.1 = 1</i> 12.4.4.	<i>If 12.4.1 = 1</i> 12.4.5.
<b>Water for livestock</b>	12.4.6.	<i>If 12.4.6 = 1</i> 12.4.7.	<i>If 12.4.6 = 1</i> 12.4.8.	<i>If 12.4.6 = 1</i> 12.4.9.	<i>If 12.4.6 = 1</i> 12.4.10.
<b>Farming land</b>	12.4.11.	<i>If 12.4.11 = 1</i> 12.4.12.	<i>If 12.4.11 = 1</i> 12.4.13.	<i>If 12.4.11 = 1</i> 12.4.14.	<i>If 12.4.11 = 1</i> 12.4.15.
<b>Grazing land</b>	12.4.16.	<i>If 12.4.16 = 1</i> 12.4.17.	<i>If 12.4.16 = 1</i> 12.4.18.	<i>If 12.4.16 = 1</i> 12.4.19.	<i>If 12.4.16 = 1</i> 12.4.20.
<b>Fishponds</b>	12.4.21.	<i>If 12.4.21 = 1</i> 12.4.22.	<i>If 12.4.21 = 1</i> 12.4.23.	<i>If 12.4.21 = 1</i> 12.4.24.	<i>If 12.4.21 = 1</i> 12.4.25.
<b>Beehives</b>	12.4.26.	<i>If 12.4.26 = 1</i> 12.4.27.	<i>If 12.4.26 = 1</i> 12.4.28.	<i>If 12.4.26 = 1</i> 12.4.29.	<i>If 12.4.26 = 1</i> 12.4.30.
<b>Timber</b>	12.4.31.	<i>If 12.4.31 = 1</i> 12.4.32.	<i>If 12.4.31 = 1</i> 12.4.33.	<i>If 12.4.31 = 1</i> 12.4.34.	<i>If 12.4.31 = 1</i> 12.4.35.
<b>NTFPs*</b>	12.4.36.	<i>If 12.4.36 = 1</i> 12.4.37.	<i>If 12.4.36 = 1</i> 12.4.38.	<i>If 12.4.36 = 1</i> 12.4.39.	<i>If 12.4.36 = 1</i> 12.4.40.

\* *Note: NTFPs = non-timber forest products, and includes medicinal plants, wild fish, wild honey, firewood, charcoal, thatch, poles and rope.*

*Code 1: [Select one option]*

*0 = no; 1 = yes;*

*-7 = refuses to answer; -8 = does not apply; -9 = don't know.*

*Code 2: [Select all that apply]*

*1 = trespass; 2 = theft; 3 = threats; 4 = damage to resource; 5 = attacks on self/members of homestead;*

*30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know*

*Code 3: [Select all that apply]*

*1 = village government; 2 = district government; 3 = national government; 4 = WMA;*

*5 = village natural resource committee; 6 = police;*

*30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know*

*Code 4: [Select one option]*

*1 = much less frequent; 2 = less frequent; 3 = no change; 4 = more frequent; 5 = much more frequent;*

*-7 = refuses to answer; -8 = does not apply; -9 = don't know.*

*Code 5: [Select one option]*

*1 = much less serious; 2 = less serious; 3 = no change; 4 = more serious; 5 = much more serious;*

*-7 = refuses to answer; -8 = does not apply; -9 = don't know.*

## 13. External aid (from non-customary network)

13.1. Do you or your dependents benefit from food aid or other benefit distribution NOW (e.g. livestock, bee hives, micro-finance credit)?

*Code 1:*

*Code 1: [Select one option]*

*0 = no; 1 = yes;*

*-7 = refuses to answer; -8 = does not apply; -9 = don't know*

### 13.2. How has the amount of food aid or other benefit distribution changed since 2014?

Code 1:

Code 1: [Select one option]

0 = has not received any aid at any point during this period; 1 = much less now; 2 = less now; 3 = no change; 4 = more now; 5 = much more now; -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 13.2 = 1,2,4,5:

### 13.3. What was the main cause of this change? Change perceived by the respondent to be related to:

Code 1:

Code 1: [Select all that apply]

0 = no particular reason; 1 = change in household needs; 2 = drought; 3 = flood; 4 = too much rain; 5 = too hot; 6 = too cold; 7 = disease; 8 = WMA provided more/less; 9 = NGO/Church provided more/less; 10 = national government provided more/less; 11 = non-WMA investor provided more/less; 30 = other (please specify); -7 = refuses to answer; -8 = does not apply; -9 = don't know

## 14. School sponsorship for children

### 14.1. Does the respondent have any children of school age today or have they had any since 2014?

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes; -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 14.1 = "Yes":

### 14.2. Have any of the respondents' children received sponsorship to go to school between 2014 and now?

Note: It does not matter how long the sponsorship was ongoing

Code 1:

Code 1: [Select one option]

0 = no; 1 = yes; -7 = refuses to answer; -8 = does not apply; -9 = don't know

If 14.2 = "Yes":

### 14.3. Who provided this scholarship:

Code 1:

Code 1: [Select all that apply]

1 = WMA; 2 = Church; 3 = national government; 4 = project/NGO; 5 = family or friends; 6 = other external aid; -7 = refuses to answer; -8 = does not apply; -9 = don't know.

## 15. Enumerator assessment of the interviewee

### 15.1. How reliable is the information generally provided by the interviewee?

Code 1:

Code 1: [Select one option]

0 = completely unreliable; 1 = poor; 2 = reasonably reliable; 3 = very reliable

15.2. List the numbers of any sections and/or questions where you think answers are less reliable

*Question numbers:*