

QUESTIONNAIRE: THE EFFECT OF CLIMATE VARIABILITY ON SMALL-SCALE FISH FARMING

INFORMED CONSENT

Household identification and interview summary	
101 District (name):	_____ Code ____ ____
01= Nkhotakota	
102 Region	_____ Code ____ ____
01= Central	
103 Respondent Name	_____
104 Traditional Authority (name):	_____ Code: ____ ____
105 Group Village Headman (name)	_____ Code: ____ ____
106 Village name:	_____ Code: ____ ____
107 Research Assistant Name	_____
108 Questionnaire Number	____ ____ ____ ____
109 Date of interview	<div style="display: flex; justify-content: space-around; font-weight: bold;"> DDMMYYYY </div> ____ ____ ____ ____ ____ ____ ____ ____ Starting time _____
To be completed after interview has been done	
Peer Reviewed by.....	<div style="display: flex; justify-content: space-around; font-weight: bold;"> DDMMYYYY </div> ____ ____ ____ ____ ____ ____ ____ ____
Name of supervisor	_____
Checked :	<div style="display: flex; justify-content: space-around; font-weight: bold;"> DDMMYYYY </div> ____ ____ ____ ____ ____ ____ ____ ____
Data entry clerk	_____
Date of data entry	_____

MODULE 2A: HOUSEHOLD COMPOSITION

		A1 ¹⁾	A2 ²⁾	A3	A4a ³⁾	A4b ⁴⁾	A5 ⁵⁾	A6
ID	Position in HH	Sex	Marital status	Age (yrs.)	Education	Other skills training	Main occupation	How long have you lived here (no of yrs.)
201	Head of HH							
202	Spouse							
203	Respondent not 201 or 202							

1) Codes: 1=male; 2=female

2) Codes: 1= single; 2=married; 3=divorced; 4=separated; 5=widowed; 6=cohabiting

3) Codes: 1= no formal education; 2=primary; 3=secondary; 4=higher education (college, university or similar)

4) Codes= 1=agricultural management skills; 2=fisheries management skills; 3=business skills; 4= other specify

5) Codes: 1=agriculture; 2=fishing; 3=hunting; 4 business, 5=house wife; 6= other specify

MODULE 2B: HOUSEHOLD STRUCTURE

(Include all members who are largely dependent on the household head for livelihoods)

Category of household/s members	Male	Female
204. Number of children under the age of 15 years		
205. Number of elder persons (70+ years) in the household		
206. Number of adults (between ages of 15 and 70 years) who are largely unable to assist the household with its farming activities due to ill health or disability		
207. Number of able bodied adults (15-70 yrs) present in the household		
208. Number of adult members of the household who are absent and dependent on the household for support		

MODULE 3: HOUSEHOLD ACCESS TO AND USE OF LAND AND NATURAL RESOURCES

Access to and use of grazing resources

301. Indicate the number of the different types of livestock the household has and uses to provide for their food and income requirements:

Livestock type	Number
Cattle	
Goats	
Sheep	
Donkeys	
Pigs	
Chickens (& other birds)	
Other:	

302a. Do you have access to grazing land?

Yes	No
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302b. If yes, is this land communally owed or your own?

Communal	Own
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303. Indicate the quality of the grazing land available to the household:

Poor	Good	Excellent
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304. Access to arable land and use of this land

(Due to different measures [hectares and acres] of land area the enumerators need to be able to estimate areas of land independently from the respondent) Note that 1 hectare = 2.4 acres

Characteristics	Arable Area 1		Arable Area 2		Arable Area 3		Arable Area 4		Arable Area 5		Arable Area 6		Arable Area 7	
Size/ Area (acres)														
Soil Quality														
Irrigated Y/N														
305.	Indicate below the proportion (%) of field (or area) planted to each crop during this 2015/2016 growing season (more than one crop can be grown in any field). Also, the quantity of each crop harvested from each land area per year should be indicated. Care should be taken to determine the measure that these quantities are represented in. For example, 50kg or 90kg bag of maize.													
	%	Yield	%	Yield	%	Yield	%	Yield	%	Yield	%	Yield	%	Yield
a. Summer Maize														
b. Winter Maize														
c. Cassava														
d. Millet														

Characteristics	Arable Area 1		Arable Area 2		Arable Area 3		Arable Area 4		Arable Area 5		Arable Area 6		Arable Area 7	
e. Sorghum														
f. Wheat														
g. Beans														
h. Soya beans														
i. Pigeon peas														
j. Ground-nuts														
k. Peas														
l. Pumpkins														
m. Pineapple														
n. Vegetables														
o. Tobacco														
p. Coffee														
q. Bananas														
r. Mangos														
s. Cotton														
t. Other specify														
u. Other specify														

306. What are amounts of fingerlings, seed, fertilizers and chemicals/pesticides applied in field?

Crop	Seed used		Fertilizer amount applied			Chemicals/pesticides amount applied		
	Unit	Amount	Type	Unit	Amount	Type	Unit	Amount
Fingerlings								
Maize								
Rice								
Cassava								
Tomato								
Tobacco								
Fish								
Other specify								
Other specify								

307. UNUSED LAND

Characteristics	Unused land	Rented to someone else
Size/Area (acres)		
Soil Quality		
Potential for irrigation	Y/N	

ACCESS TO WATER

308. Do you have access to water for cultivation and/or ponds?

Yes	No
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309. Where do you source this water from:

Individual furrow from a river/stream	From a shared irrigation furrow	Furrow from a spring	Well	Ground water seepage

310. Indicate the relative amounts of water you have access to for irrigation and/or ponds during each month of the year.

		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Relative Amount	Irrig.												
	Ponds												

To indicate relative amount, ask respondent to rank the water supply for each month from 0 – 1. (0 being no flow and 1 being the strongest flow)

311. If the supply of water is variable, what are the factors that cause this variability?

Rainfall (flood/drought)	Stream flow	Competition from other users	Seepage from furrow	Evaporation

312. Is there enough water available to support additional ponds and/or larger areas of irrigated cultivation?

Yes	No
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313. If there is enough water to allow expansion, what would be the preferred use for this water?

1. Irrigated cultivation	2. Fish Ponds	3. Other

MODULE 4: HOUSEHOLD LIVELIHOODS AND WEALTH INDICATORS

401. Indicate in the table below the sources of income obtained by the households and the relative proportions that each of these sources contribute to total household income.

Indicate in the table below the period of the year in which each source of income is received or generated.

Source of household income	Tick if Yes	Contribution to total annual household income (%)	Period during which this income is received
a. Full-time formal employment			
b. Part-time formal employment			
c. Owner business (artisan, shop-keeper, taxi driver, etc)			
d. Casual/temporary off-farm employment			
e. Seasonal farm employment for money			
f. Pension or Welfare grant			
g. Remittances			
h. Sale of tobacco			
i. Sale of coffee			
j. Sale of fruit and vegetables			
k. Sale of food crops (Maize, cassava, beans, groundnuts, pumpkins, etc)			
l. Sale of cotton			
m. Sale of cattle, sheep or goats			
n. Sale of pigs and chickens			
o. Sale of milk and eggs			
p. Sale of hides and skins			
q. Sale of fish			
r. Rent			
s. Other			
Total		(100%)	

402. Indicate the proportion of income spent on the following items:

Expenditure Items	Proportion of annual income spent (%)
a. Education (fees + uniforms, etc)	
b. Transport	
c. Maize, cassava or rice for household consumption	
d. Fish for hh consumption	
e. Other foods for hh consumption	

Expenditure Items	Proportion of annual income spent (%)
f. Building materials	
g. Clothing & blankets	
h. Furnishings and domestic utensils	
i. Tools and inputs for productive activities	
j. Luxuries (non-essential items)	
k. Labour	
l. Rents	
m. Others	

403. Does the household have the following assets: (tick those they have)?

Asset name	Quantity	Year purchased / given	Cost of asset
a. Radio/music player			
b. Bicycle			
c. Motor Vehicle			
d. Tractor			
e. Net for fish harvesting			
f. Wheel-barrow			
g. Oxcart			
h. Iron sheets on house			
i. Hoes (number?)			
j. Others			

MODULE 404: FOOD SECURITY

401a. Are there periods during the year when your household has nothing or very little food to eat from on-farm production?

Yes	No
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401b. If yes, please indicate these periods in the table below and rank the degree of on-farm food shortage from 0-3.

Zero (0) = no lack of food, 1 = a lack of protein (relish) but no shortage of other foods, 2 = no staple but other sources of relish and vegetables, 3 = no staple food or other sources of food.

401c. Please also indicate in the table when it is necessary to buy staple foods such as maize, cassava or rice for household consumption. (Tick months when staple food needs to be bought)

	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Own food												
Buy												

402a. Does the household engage in Ganyu?

Yes	No
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402b. Indicate the periods of the year when Ganyu is engaged in.

Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May

403. Based on the discussions held with the farmer and observation of the household, enumerators are to provide a general opinion as to the level of food security that a household enjoys. (This is used simply to back-up the information recorded in 26 above and does not replace it.)

1. Food secure	2. Partially food secure	3. Food insecure
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MODULE 5: FISH FARMING ACTIVITIES

501a. Are you currently involved in fish farming?

Yes	No
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If no:

501b. Have they been involved in fish farming before (during earlier period)?

Yes	No
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If yes:

501c. During what period did they engage in fish farming?

.....

.....

.....

501d. Why did they stop fish farming?

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.....

If they are currently involved in fish farming:

502. Why did they first become involved in fish farming?

a. Fish farming Project	b. Self-motivation	c. Inheritance	d. Other
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503. Are you a member of a fish farming club?

Yes	No
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504. What are the conditions for one to be a member?

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.....

505. What are services provided by the club?

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.....

506. How has these services improved your livelihoods?

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.....

.....

If they are currently or were previously involved in fish farming:

507. From whom/where did they get the information and advice they needed to start and maintain fish farming?

Source of Information	Tick
a. Father/Grandfather/Uncle/Guardian	
b. Discussion with neighbours	
c. Observation of neighbours	
d. Fish Farmers Club	
e. Fisheries Extension Officer	
f. Project/NGO	
g. Name Project:	
h. Reading material	
i. Radio	
j. School	
k. Fish farming training (From whom?):	

Respondent may indicate more than one source of information

508a. Who in the household is mainly responsible for the fish farming activities?

1. Head of Household	2. Another household member
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508b. If the person mainly responsible for the household's fish farming activities is **not the head of the household (respondent)** please provide the details of the person responsible in the table below:

Person Responsible for Fish Farming	Characteristics
a. Age	
b. Male / Female	
c. Highest level of education	
d. Relationship to household head	

Fish Ponds

509. To be answered by those currently involved in fish farming as well as those who may have been engaged in fish farming in the past (but not currently).

Characteristics	Pond 1	Pond 2	Pond 3
a. How did you get a pond?			
b. Year of construction			
c. Cost for each (MK)			
d. Length of pond			
e. Breadth of pond			
f. Date of last stocking			
g. Number of each species put into pond at last stocking	TR = OS = CG = OK = CC =	TR = OS = CG = OK = CC =	TR = OS = CG = OK = CC =
h. Month and year of last large harvest			

Choices for a & g

a: How did you get a pond? 1 = inherited; 2 = Self constructed; 3 = constructed with paid labour; 4 = Project constructed; 5 = taken over from somebody else (though sale, gift or transfer, etc)

g: Species: TR = *Tilapia rendalli* (Chilinguni); OS = *Oreochromis shiranus* (Makumba); CG = *Clarias gariepinus* (Mlamba) OK = *Oreochromis karongae* (Chambo), CC = *Cyprinus carpio*

510. Do you want to expand your fish farming operations?

Yes	No
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511. If you wanted to construct more ponds in the future, would you be able to access land with a continuous water supply?

Yes	No	Unsure
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Fish Farming Objectives

512. What are, or were your objectives for your fish farming activities?

Type of Objective	Tick
a. To provide the households with a source of protein	
b. To diversify the household's food sources.	
c. To produce fish for distribution to family, friends and neighbours for the purpose of building and strengthening social relationships	
d. To produce fish for sale to generate income	
e. To increase the social status of the household/person	
f. Because you are interested in it (Hobby) or want to experiment with new productive activities	
g. For educational and community development purposes.	
h. Other	

Sources of fingerlings

513. Where have they obtained fingerlings?

Source of fingerlings	Tick	Species
a. Donations from neighbours/kin		
b. Purchase from neighbours		
c. Purchase from other fish farmers (Who?).....		
d. Purchase from Department of Fisheries (Where?).....		
e. Self-production		
f. Other		

514. Indicate in the table below whether it is difficult to get access to different types of fingerlings or not and why.

Species	Difficult Y/N	Why?
a. TR		
b. OS		
c. CG		
d. OK		
e. CC		

515a. What is the your preferred species for fingerlings?

515b Why?

FISH FEEDING ACTIVITIES DURING THE LAST YEAR

516. Indicate the relative amount of each food source fed to fish in each month. Rank the supply of each feed source for each month from 0–2. (2 being the largest quantity of feed)

Food Source	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec
a. Manure (type).....												
b. Compost												
c. Maize bran												
d. Rice bran												
e. Cassava												
f. Soya												
g. Leaves/ Grass												
h. Vegetable matter												
i. Other:												

Manure types: Goat = 1; chicken = 2; cow = 3; pig = 4; rabbit = 5; Other = 6

517. Do you provide your fish with supplementary feeds? | ____ | 1) Yes 2) No

518a. Do you give mineral premixes to your fish? | ____ | ____ |

1. Yes 2. No

518b. If yes, what is the source of the premix?

519. What is the cost of the mineral premix | ____ | ____ | packet

520. Do you face any problems with supplements feeding? | ____ | ____ |

1) Yes 2) No

521. What are the problems with supplement feeding?

1) High Cost of feed

2) Inadequate availability

3) Inconsistent supply

4) Other specify _____

523. How do you treat disease outbreak of your fish | ____ | ____ |

1. Yes 2. No

524. How often are your fish attacked by diseases? | ____ | ____ |

525a. Do you face major problems on disease disorders and treatments?

1. Yes 2. No

525b. If yes, what could be the possible cause of the case? |____| |____|

- 1) Fleas
- 2) Feeding (nutritional problems)
- 3) Worms
- 4) Injury
- 5) Calving (dystocia)
- 6) Other specify

524c. Number of treatments per growing season |____|

524d. Total costs per growing season |____| |____|

Harvesting of Fish

525. Which fish harvesting methods do you use?

a. Break dyke / total pond drainage	b. Seine nets (less than 1 inch)	c. Seine nets (more than 1 inch)	d. Hook & Line	e. Basket	f. Reed fence	g. Other

526. If you have harvested using a net, do you own this net or did you hire/borrow it?

Own Net	Hired/Borrowed Net
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527. From whom did you hire or borrow the net?

.....
.....
.....

528. Do you keep records of your fish harvests?

Yes	No
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529. Enumerator to ask if he can have a look at these records and rank the quality of these records.

a. Good	b. Poor	c. No Records
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530a. Does the price that you receive for the same weight of small and large fish differ when you sell your fish?

Yes	No	Don't know
-----	----	------------

530b. If yes, for which do you receive a higher price?

Large	Small
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530c. If you partially harvest fish from the pond/s for home consumption, how often do you catch fish in this way for each month of the last year?

Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May

For each month indicate whether partial harvesting takes place on a daily, weekly, monthly or irregular basis, or not at all. D = Daily, W = weekly, M = monthly, I = irregularly. No fishing = N

530d. How many fish do you catch at any one time when you partial harvest for home consumption?
.....

530e. What is the average size of the fish caught when you partial harvest for home consumption?
(Enumerator to obtain measure in hands and record in cm)
.....

FISH PRODUCTION AND MARKETING

531. Production and utilization

Year	Unit	Production	HH consumption	Quantity sold	Unit price	Total value	Who buys? (See codes)
2011							
2012							
2013							
2014							
2015							

Codes. 1 Community members, 2 super markets/shops, 3 institutions, 4 other specify

532a. Do you produce fingerlings? (Use code: 1 = yes, 2 = No) _____

532b. If yes, proceed to the table below.

Year	Unit	Quantity sold	Unit price	Total value	Who buys? (See codes)
2011					
2012					
2013					
2014					
2015					

Codes. 1 Fellow farmers, 2 NGOs/CBOs, 3 research institutions, 4 other specify

LABOR COSTS

533. Who is normally involved in farming activities? |____|____|

- a. Family members
- b. Casual worker
- c. Both

534a. If Casual: Labour; How much do you pay for casual labour/day (Or per month)?
MK_____

534b. Estimated Annual Cost.....

INFORMATION ON FISH MARKETING (for the past 12 months)

535a. Where do you sell your fish? |____|____|

1. Urban markets 2. Middle men 3. Within the village 4. Other specify Local Market 5. Other specify_____

535b. What are the reasons for selling fish at this market? |____|____|

1. Better prices, 2. NGO encourages it, 3. Direct cash payment, 4. Closer to the farm

535c. How far are you from the nearest market? |____|____|

1. <1km 2) 1-1.9km 3) 2-2.9km 4) 3-3.9km 5) 4-4.9km 6. >5km

535d. How much do you pay for transporting fish to the market place? (If applicable)
MK_____

535e. What was the average price of fish for the past 12months? MK |____|____|/ piece or Kilogram

536. What problems do you face with the marketing of your fish |____|____|

- 1. low fish prices
- 2. long distance
- 3. late payments
- 4. leadership at the club
- 5. Other (Specify)_____

537. Which activity (ies) attract much costs on your fish farm?

- 1) Feed
- 2) Physical structures
- 3) Marketing costs
- 4) Labour
- 5) Other (Specify)_____

ACCESS TO EXTENSION SERVICES & CREDIT

538. Do you have access to extension services? | ____ | ____ |

1) No 2) Yes

539. Who provides fish farming extension services? | ____ | ____ |

1.) Government 2) NGO (Specify) _____ 3) Both

540. How often are you visited by extension agents per month?

.....

541a. Do you have lead farmers for fish farming? | ____ | ____ |

1) No 2) Yes

541b. If yes, explain how they are selected.

.....

542. What is the role for these lead farmers in fish farming?

.....

543. Do you think the lead farming model is very important in fish farming?

.....

544. Level of adoption of aquaculture technologies

No.	Aquaculture technologies	Level of Adoption of technologies ¹⁾	Source of technology	Year
a.	Integrated fish farming			
b.	Use of manure in ponds			
c.	Direct feeding of fish with formulated feeds			
d.	Direct feeding of fish with maize bran			
e.	Direct feeding of fish with vegetables			
	Direct feeding of fish with indigenous feeds			
f.	Cleaning the ponds after harvest			
g.	Using PVCs for outlets and inlets			
h.	Improved fish breeds (Makumba)			

No.	Aquaculture technologies	Level of Adoption of technologies ¹⁾	Source of technology	Year
i.	Use of indigenous technology to improve pond buffer system (use of ash)			
j.	Use of harpa system for breeding			
Others				

Level of Adoption of technologies ¹⁾ : 1 = Adopting, 2 =Not Adopting

545. How does knowledge on new fish farming technologies trickle down to you?

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.....

546. Does fish farming have different extension agents as compared to agriculture?

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.....

.....

547. Are you involved in on-farm research? If yes, explain how you were selected.

.....

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548. What are the major problems faced by extension agents?

.....

.....

.....

549. Do you think the way information is disseminated in fish farming needs improvement. Please explain your response.

.....

.....

.....

550a. Do you have access to credit for your fish enterprise?

1) Yes 2) No

552b. If yes, what type of loan?

1) seed scheme

2) cash loan

3) Feed loan

4) other loans (specify)_____

550c. What is the source of that loan?

Other (Specify)_____

551. What are the key challenges in your fish production enterprise (in order of importance)?

.....
.....
.....

FISH CAPTURING

552a. Do you think it is better to combine capture fisheries and fish farming?

Yes	No
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552b. If yes, please explain.....

.....

PERCEPTIONS OF FISH FARMING ACTIVITIES

553a. Are you satisfied with your current fish production?

Yes	No

553b. If no, why?

.....
.....
.....

554. What specific issues do you think need to be addressed in order for you to be more successful at fish farming?

.....
.....
.....

MODULE 6: CLIMATE CHANGE RISKS

601. What are the biophysical changes that have occurred in the last 20 years?

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.....
.....

602. What are the impacts of these biophysical changes to your fish ponds and the community at large?

.....
.....
.....

603. When did you first notice that there has been significant change in climate/weather patterns?
(Indicate the decade, e.g. 1980s) _____

604. How many drought/flood incidences have you witnessed in your lifetime?

(a) Drought incidences: 1=less than 3, 2= 4-6, 3= more than 6 incidences; 4 = Never witnessed

(b) Flood incidences: 1=less than 3, 2= 4-6, 3= more than 6 incidences; 4 = Never witnessed

605. In which decade, would you say there has been frequent adverse weather events or climate / weather patterns in this area? 1= 1980s, 2= 1990s, 3= 2000s, 4= Other specify

606. What type of extreme weather events have been common in this area in the last five years?
(Multiple responses are allowed).

1= Increased drought incidences, 2= Increased flood incidences, 3= Extreme temperatures 4=Late rains 5=Dry spells 6=Early rains

607. Do you have access to the weather forecasting data/information from the meteorological department? 1= yes 2= no

608. What is the source of this weather forecasting information? (Multiple responses are allowed)

1.= Radio station; 2. = Newspaper; 3. = Extension workers; 4. = Friends in the village; 5. = Household (Family) members; 6. = Church; 8. = Meteorological Station; 7. Other specify

609. Do you know of any traditional methods/indicators of predicting weather? 1= yes 2= no

610. If YES to 1009 above, name these indicators/methods used to predict weather patterns

Weather pattern	Prediction Indicators
Drought Year	
Normal year (Rainfall)	
Flood Year	
Very cold winters	
Normal winters	
Very hot summer	
Normal summer	

611. Over the past five years, when did you experience these extreme weather events?

1= 2011 2= 2012 3= 2013 4= 2014 5= 2015

612. How often did you experience these extreme weather events?

1= 2011 ☐ 2= 2012 ☐ 3= 2013 ☐ 4= 2014 ☐ 5= 2015 ☐

613. In most cases, how long does these extreme weather events?

2011: 1= 1 week |___| 2= 2 weeks |___| 3= 1 month |___| 4= three months |___|

2012: 1= 1 week |___| 2= 2 weeks |___| 3= 1 month |___| 4= three months |___|

2013: 1= 1 week |___| 2= 2 weeks |___| 3= 1 month |___| 4= three months |___|

2014: 1= 1 week |___| 2= 2 weeks |___| 3= 1 month |___| 4= three months |___|

2015: 1= 1 week |___| 2= 2 weeks |___| 3= 1 month |___| 4= three months |___|

614. What common damages/ losses do people in this area usually experience due to extreme weather events?

1= Crop damage |___| 2= Livestock loss |___| 3= Loss of biodiversity |___| 4= Scarcity of water |___| 5= Low yields |___| 6. Low fish catches |___| 7 = Fishing vessels damage |___| 8. Fishing gear damage |___| 9 = Others specify

615. How has the prolonged dry spells affected your fish farming?

a. Negative

b. Positive

1. _____ 1

2. _____ 2

3. _____ 3

616. What are the observed changes in the rainfall patterns in the last 20- 30 years?

1= No changes |___| 2= late onset of season |___| 3= Early onset of the season |___|

4= erratic |___| 5= Poor distribution |___|

617. What are the observed changes in the rainfall intensity in the last 20- 30 years?

1= Increasing |___| 2. Decreasing |___| 3. No change |___|

MODULE 7: PERCEPTIONS ON CLIMATE & ECOSYSTEM CHANGES

701. Have you noticed any significant changes in weather patterns over the years in relation to fish farming? 1= yes 2= no ☐

702. If **YES**, what changes have you observed?

1=increased drought incidences, 2=increased floods, 3=poor rainfall distributions, 4=extremes in temperatures (e.g. very cold winters/frost/very hot summer), 5= persistent mvera winds 6 = other (specify)

703. Which years did you get poor fish production in the past 20 years? _____

704. In your own view, what are the causes of fish production variability or change?

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705. From the time you observed changes in climate (weather conditions); to what level have you observed a corresponding change in the following;

Variables	Increased	Same	Declined
a. Fish catches			
b. Aquatic biodiversity			
c. Fish diseases			
d. Fish kills			
e. Ecosystem quality			

706. Has there been any changes to the ecosystem on the following:

Variables	Increased	Same	Declined
a. Number of trees			
b. Reeds			
c. Wetlands			
d. Rivers flow			
e. Size of rivers (depth & width)			
f. Soil type			

MODULE 8: ANALYSIS OF ADAPTATION MEASURES TO CLIMATE CHANGE

801. What strategies have you put in place to adapt to climate change?

Risks	Strategies (Use codes below and fill each box, multiple answers possible)				
Drought					
Floods					
Strong winds					
Other_____					

Code: 1=crop diversification, 2 =adjusting timing for farm operation, 3=Changes in tillage practices, 4= Irrigation , 5 =Efficient water use, 6=food rationing , 7 =digging deeper wells , 8 =rent , 9 =casual labor, 10= selling livestock , 11=IGA , 12= charcoal burning, 13= use of wild plant , 14= fishing, 15= migration, 16= selling household assets, 17 = Use efficient fishing gear, 18= other

802. What challenges and constraints are you facing in trying to adapt to climate change?

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.....
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803. What interventions would you wish to be carried out to adapt to climate change impacts?

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END OF QUESTIONS, THANK YOU VERY MUCH FOR YOUR TIME!