

## Supplementary Information

### Appendix I

#### OBAFEMI AWOLOWO UNIVERSITY ILE-IFE, OSUN STATE, NIGERIA

##### FACULTY OF SOCIAL SCIENCES

- DEPARTMENT OF GEOGRAPHY
- QUESTIONNAIRE ON ASSESSMENT OF CATTLE HERDERS' RESPONSES TO CLIMATE VARIABILITY AND CHANGE IN GUINEA SAVANNAH ECOLOGICAL ZONE OF NIGERIA

Dear respondent,

I am a Master student of the department of geography, faculty of Social Sciences Obafemi Awolowo University, Ile-Ife. I am carrying out this research in partial fulfillment of my M.Sc in geography. Your assistance is kindly required in supplying information requested for in this questionnaire. The exercise is purely for academic purpose only and your response in this regard would be treated strictly as confidential.

Date of interview \_\_\_\_\_

Location of interview \_\_\_\_\_

#### SECTION A (SOCIO- ECONOMIC CHARACTERISTICS)

1. Gender (a) Male [ ] (b) Female [ ]
2. Age (a) less than 18yrs [ ] (b) 18 -30yrs [ ] (c) 31-45 [ ] (d) 46-and above [ ]
3. Marital status (a) Single (b) Married [ ] (c) Divorced [ ] (d) Widowed [ ]
4. What is your educational status? (a) No formal education [ ] (b) Primary School Leaving Certificate [ ] (c) Secondary School Certificate [ ] (d) ND/HND/BSC [ ] (e) Post Graduate [ ]
5. Occupation? (a) Farming [ ] (b) Self-Employed [ ] (c) student [ ] (d) civil servant [ ] (e) house wife [ ]
6. what is your position to this head of cattle (a) herdsman [ ] (b) hireling (c) Herdsman's child [ ]
7. What is your average monthly income? (a) below #5,000 [ ] (b) #5,000 - #15,000 [ ] (c) #15,001-25,000 [ ] (d) #25,000-#35,000 [ ] (e) above #35,000 [ ]
8. What is your ethnic? (a) Yoruba [ ] (b) Hausa [ ] (c) Ibo [ ] (d) Fulani [ ] (e) other (specify) \_\_\_\_\_

#### SECTION B (Extreme Climate Variability and Change, water Availability and Coping Strategies of herders)

1. How many cattle did you have in herd? (a) below 20 cattle [ ] (b) 20-60 cattle [ ] (c) 61-100 cattle [ ] (d) above 100 cattle [ ]
2. What is element of weather that has critical effect on your cattle? (a) temperature [ ] (b) rainfall [ ] (c) wind [ ] (d) humidity [ ]
3. Which of the following extreme climate events is the major threat to your cattle (a) drought [ ] (b) flood [ ] (c) cyclone ( d) other specify \_\_\_\_\_
4. What is your major source of water supply? (a) Well [ ] (b) stream/river [ ] (c) Borehole [ ] (d) pipe borne water [ ]
5. What is the average litres of water a cattle consume daily? (a) less than 10litres [ ] (b) 10litres-20litres [ ] (c) 21litre-30litres [ ] (d) 31litre-40litres [ ]
6. What is the distance cover in seeking for water during the raining season (a) less than 1KM [ ] (b) 1KM -5KM [ ] (c) 5.1KM - 10KM [ ] (d) more than 10KM [ ]
7. What is the distance cover in seeking for water during the dry season? (a) less than 1KM [ ] (b) 1KM -1KM [ ] (c) 5.1KM - 10KM [ ] (d) more than 10KM [ ]
8. What year(s) do you experience climate variability in the past 30 years: -----
9. What is the distance cover in seeking for water during the drought? (a) less than 1KM [ ] (b) 1KM -5KM [ ] (c) 5.1KM - 10KM [ ] (d) more than 10KM [ ]
10. What is the short fall of water resources in you environment? (a) Scarcity [ ] (b) pollution [ ] (c) cost [ ]
11. What is the major reason for the short fall? (a) Increase in population [ ] (b) seasonality of rain [ ] (c) poor water facilities [ ] (d) drought [ ]
12. Have your cattle ever contacted by any climatic related diseases? (a) Yes [ ] (b) No [ ]
13. if yes, list the climatic related diseases: -----
14. What are the coping strategies you turn to in the time of drought and water scarcity? (a) reducing the amount of daily water (b) migration [ ] (c) turning to other sources of water supply [ ] (d) others specify \_\_\_\_\_

15. how effective is this strategies (a) Excellent  (b) very good  (c) good  (d) Fair
16. What is the major grazing pattern of your herd during raining season? (a) natural pasture  (b) crop residue  (c) planted pasture  (d) pasture regrowth after bush burning
17. What is the major grazing pattern of your herd during the dry season? (a) natural pasture  (b) crop residue  (c) planted pasture  (d) pasture regrowth after bush burning
18. When is the pattern of conception in your herd of cattle (a) unimodal  (b) multi modal  (a) even throughout the year  (d) no pattern
19. What is the highest period of conception among your cattle (a) January to march  (b) April to June  (c) July to September  (d) October to December
20. What is the highest calving period among your cattle (a) December to February  (b) March to May  (c) June to August  (d) September to November
21. What is the major cause of high mortality in you cattle (a) insufficient food  (b) wild animal invasion  (c) lack of adequate water  (d) injuries
22. Impact of drought on conceived cattle? (a) miscarriages  (b)death  (c)constant diseases (d) Pain during calving
23. What is the effect of drought on the calf? (a)Stunted growth (b)Infection  (c)Death  (d)Weak
24. What is the benefit of drought to your cattle\_\_\_\_\_
7. What source of water did you prefer? a) Well  (b) tap water  (c) borehole  (d) River or stream
8. What is the distance of your source of water supply to your household during the raining season? (a) Inside your compound  (b) 100m-300m  (c) 100m- 500m  (d) more than 500m
9. What is the distance of your source of water supply to your household during the dry season or time of drought? (a) Inside your compound  (b) 100m-300m  (c) 100m- 500m  (d) more than 500m
10. Did amount of water available meet you demand of water? (a) Yes  (b) No
11. What is the major reason for water scarcity in your area? (a) Increase in population  (b) seasonality of rain  (b) poor water facilities  (d) drought
12. Have you ever contacted by any water borne diseases? (a) Yes  (b) No
13. Have you ever been contacted by any climatic related diseases? (a) Yes  (b) No
14. What are the coping strategies you turn to in the time of draught and water scarcity? (a) reduction of level of water consumption (b) migration (c) turning to other source of water supply (d) others specify\_\_\_\_\_
15. What is the benefit of drought to your household\_\_\_\_\_

### SECTION C (For Cattle herders' wife)

1. What is element of weather that has critical effect on your cattle? (a) Temperature (b) Rainfall (c) Wind (d) Humidity
2. What is your major source of water supply? (a) Well  (b) stream/river  (c) Borehole  (d) pipe borne water
3. What did you demand water majorly? (a) Domestic use  (b) industrial use  (c) agricultural use  (d) recreational use  (e) other specify\_\_\_\_\_
4. What is the average litres of water did your household consume daily? (a) less than 100litrs  (b)100litres-200litres  (c) 201litre-300litres  (d)300litre-400litres
5. What is the major source of your drinking water? (a) Well  (b) tap water  (c) borehole  (d) stream or river
6. What source of water did you have access to? a) Well  (b) tap water  (c) Borehole  (d) stream or river