

## **8. Appendices**

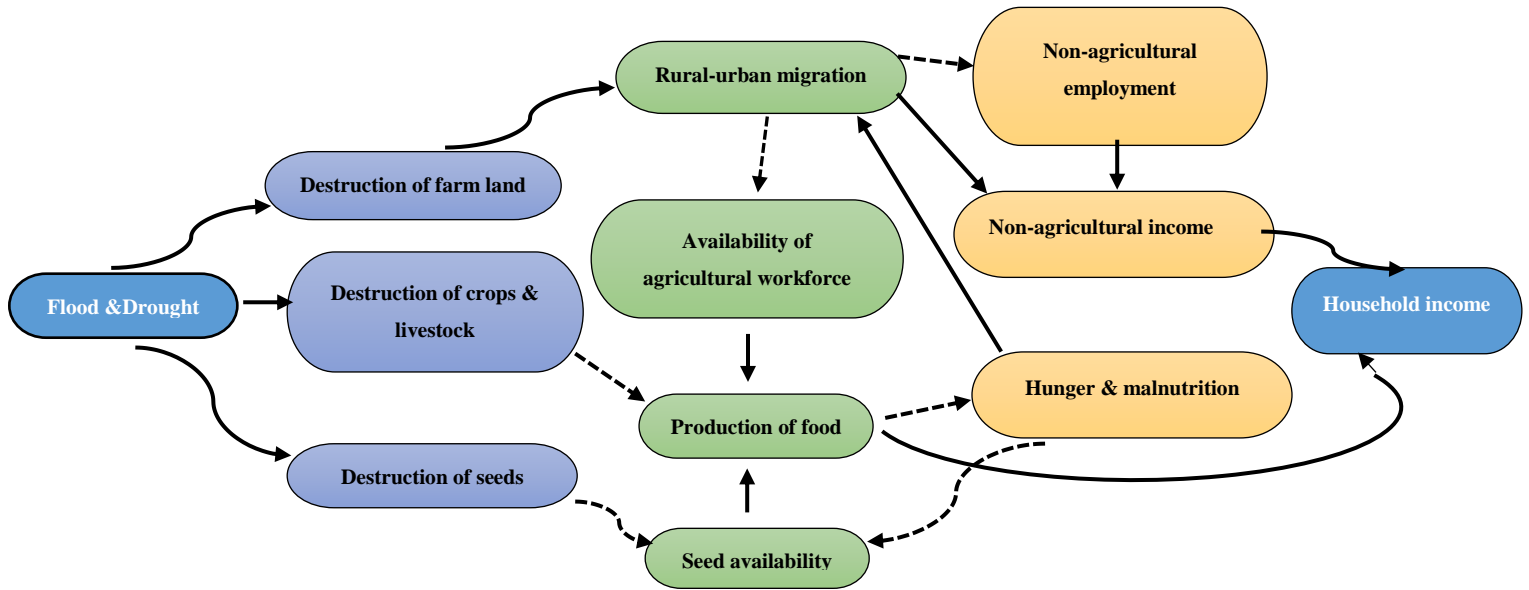
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## Appendix 1: A Cause-effect diagram depicting the consequences of flood and drought in the northern region of Ghana



----- (-) negative relationship (change in opposite direction)

————— (+) positive relationship (change in similar direction)

(Source: Adapted from Armah et al. 2010)

## Appendix 2: Questionnaire for crop farmers in English language

### Czech University of Life Sciences, Faculty of Tropical Agrisciences

This questionnaires has been designed to execute a research purposely for academic work. The researscher is **Emmanuel Quintin-Cofie** a student pursuing masters degree in International Development and Agricultural Economics at the Czech University of Life Scieeces. The main objective of the research is to assess the Impact of Mobile phone Technology on Agricultural Information Services delivery in the Northern region of Ghana. All information provided will be used solely and exclusively for academic purpose and would be treated with the necessary confidentiality it deserves. Information provided would be used to make sound empirical analysis and also suggest policy recommendations that would help improve agricultural information services delivered to farmers and improve productivity as well as farmer’s socio-economic well being and standard of living in the region. The entire interview will take nearly one hour of your time and you are kindly requested to provide honest and genuine responses within your possible best. Thank you.

### Section 1: Socio-demographic Characteristics of Farmers

1. Name of Interviewer .....

2. Name of Respondent.....

3. Name of District .....

4. Name of Community.....

5. Name of Respondent.....

6. Age of Respondent.....

[1] Less than 20 years                      [2] 21-30 years                      [3] 31- 40 years

[4] 41-50 years                      [5] 51-60 years                      [6] 61+ years

7. Sex of Respondent    [1] Male                      [2] Female

8. Marital Status [1] Married    [2] Single    [3] Divorced    [4] Widowed

9.Level of Education [1] No Formal Education [2] Primary/Basic [3] SHS/Technical/Vocational [4] Tertiary

10.Is farming your main source of income [1] Yes [2] No

11.Which other economic activities are you involved in.....

12. Level of income annually from farming [1] GH¢ 100.00 -500.00 GH¢ [2] GH¢500- GH¢1000.00 [3] GH¢1000.00- GH¢1500.00 [4] GH¢1500.00- GH¢2000.00 [5] Above GH¢2000.00

13. Are you the head of the Household? [1] Yes [2] No

14. Are you a member of a farmer based organization or group? [1] Yes [2] No

15. What is your household size? .....

16. Number of years in farming .....

17. What is your farm size .....

18. Do you use modern farming methods [1] Yes [2] No

19. Do you use irrigation system on you farm [1] Yes [2] No

20 . What crops do you cultivate?

| S/NO | Crops       | Number of Acres |
|------|-------------|-----------------|
| 1    | Millet      |                 |
| 2    | Maize       |                 |
| 3    | Sorghum     |                 |
| 4    | Groundnut   |                 |
| 5    | Soyabean    |                 |
| 6    | Beans       |                 |
| 7    | Sweetpotato |                 |
| 8    | vegetables  |                 |
| 9    | Cowpea      |                 |
| 10   | Rice        |                 |
| 11   | Yam         |                 |

**Section 2: Farmers access to agricultural information**

21. What is your preferred extension information on the crops you grow? You can choose more than one option. [1]Weather [2]Market [3]Pest and disease control [4]Fertilizer application [5]Other,specify.....

22. Do you get access to extension information services [1] Yes [2] No

23. If Yes,what kind of extension information do you receive?[1]Weather [2] Market [3] Pest and disease control [4]Fertilizer application [5]Other,specify.....

24. If Yes, how often are you visited by Agric.Extension Agents?

[1]once a week [2] once a month [3] once every six months [4]once a year [5] cant remember [5] other, specify.....

25.What methods of of information delivery are used by Agric Extension Agents? You can choose more than one option.

[1] Home and farm visits [2]Group meetings [3] Farmer based organizations [4] Posters [5] Radio [6]Mobile phone calls [7]Mobile phone SMS [8]Other,specify.....

26. What are your major source(s) of agricultural information? You can choose more than one option

[1] Radio [2] Mobile phone [3]Television [4] Agric Extension Agents [5] Fellow farmers [6]Other,specify.....

27. What is your most preferred source(s) of agricultural information? [1]Radio [2] Mobile phone information service[3]TV [4] Agric Extension Agents [5] Fellow farmers [6]Other,specify.....

28. Give reason for your preferred source(s) of extension information in Question 27 above.....

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**Section 3: Mobile Agricultural Information Delivery**

29. Do you own a mobile phone? [1] Yes [2] No (If response is Yes, move to question 29)

30. What do you use the mobile phone for? You can choose more than one option.

[1] Making calls [2] Receiving messages [3] Browsing the internet [4] Accessing agricultural information [5] Other,specify.....

31. If used in accessing agricultural information,which source? You can choose more than one option . [1] NGO [2] Agric Extension Officers [3] Friends [4] Family [5] Internet [6] Esoko and Farmers Club mobile service [7] Other,specify.....

32. How often do you receive agricultural information via mobile phone? [1] Daily [2] weekly [3] monthly [4] As and when needed [5] Other, specify.....

33. In which form do you normally receive agricultural information via the mobile phone? [1] Calls [2] Messages [3] Internet [4] other,specify.....

34. Do you apply the agricultural information obtained via mobile phone [1] Yes [2] No

35. If Yes, how often do you apply the information obtained [1] Always [2] Sometimes [3] Seldomly [4] Other, specify.....

36. What is your most preferred form(s) of receiving agricultural information via phone? You can choose more than one option [1] Calls [2] Messages [3] Internet [4] Other,specify.....

37. Give reasons for your preferred choice(s) in Question 35 above.

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38. Do you have accesss to Esoko and Farmers club mobile weather and market information [1] Yes [2] No. If yes answer question 38 to 42

39. Information provided is very useful. [1] Strongly agree [2] Agree [3] Not Sure [4] Disagree [5] Strongly disagree

40. Information provided is very reliable [1] Strongly agree [2] Agree [3] Not Sure [4] Disagree [5] Strongly disagree

41. Information provided is very satisfactory [1] Strongly agree [2] Agree [3] Not Sure [4] Disagree [5] Strongly disagree

42. Will you be willing to fully subscribe to the Esoko and Farmers club weateher and market information services after the pilot project [1] Yes [2] No

43. Will you be willing to pay for charges for services provided [1] Yes [2] No

**Section 4: Constraints in using mobile phone based agricultural information services**

44. What are some of the challenges you face when using mobile phone to access weather and maket information from Esoko and Farmers club project? Mention them

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**THE END**

**THANK YOU FOR YOUR TIME, PATIENCE AND PARTICIPATION.**

**Appendix 3: A photo coverage of researcher administering questionnaire to respondents within the study area**

