

### Supplementary Materials

**S1:** Household survey questionnaire used to collect data from farmers on demographic and farm variables, perceptions, and factors driving agricultural land-use change in Benue state, Nigeria

Direction: Tick (✓) or complete the appropriate spaces below for the corresponding question	
<b>Control question</b>	
	Are you the head of the household? Yes                      No      (Continue only if yes)
<b>Demographic data</b>	
1	Name of community
2	Gender              Male                      Female
3	In which year were you born?
4	How many adults are living in this household? (18 years and above)
5	How many children are living in this household? (Less than 18 years)
6	What is your marital status? Married              Single              Divorced              widowed
7	If married, how many spouses?
8	Which of the category below best describe your level of education? Tertiary education                      Secondary education Primary education                      No formal education
<b>Farm data</b>	
9	How long have you been farming?
10	Can you estimate the total size of your farm?
11	How much of it is: Owned by you      Leased Rented              Communally owned
12	Can you estimate your annual gross farm income? ₦
13	What type of crop do you plant? Arable crops                      Vegetable crops Permanent crops                      Mixed crops
14	What type of cropping system are you practicing? Intercropping                      Rotational cropping                      Monocropping Others.....
<b>Agricultural land-use change data</b>	
15	Has there been change in the area of your cropland? Within the last 1 year                      Within the last 5 years Within the last 10 years                      Within the last 20 years
16	Was the change in question 15? (a) An upward change                      or                      (b) a downward change Within the last 1 year                      Within the last 1 year Within the last 5 years                      Within the last 5 years Within the last 10 years                      Within the last 10 years Within the last 20 years                      Within the last 20 years
17	If your answer in question 16 is (a), what factors do you think are responsible? I bought more lands                      I inherited more lands Others (please specify).....
18	If your answer in question 16 is (b), what factors do you think are responsible? Urban infrastructure                      Land degradation (e.g. erosion) Transportation infrastructure                      Land conflict Tourism and recreational facilities                      Rainfall variability Land tenure system                      Drought

Selling of land due to Poverty	Flooding
Population growth	Government land-use policies (e.g. grazing policy)
Others (please specify).....	

**S2:** Question guide used during the Participatory rural appraisal meetings with stakeholders in Benue State, Nigeria.

#### **Farmers**

1. Have you experienced any change in your croplands over the years? If yes, what are the changes, and when did these changes occur?
2. How has the changes you have made on your croplands related to the changes you have experienced on your lands?
3. What factors do you think are responsible for these changes, and why?
4. Have these changes affected your farming decisions, if yes how?
5. Have these changes affected your crop yield/output, if yes how?
6. Have you received or experienced any government intervention to protect croplands, and if yes, what form of government intervention?
7. Is there any other thing you will like to talk about concerning agricultural land-use changes in Benue state?

#### **Forest dwellers**

1. Have you experienced any change in the forest vegetation in this community over the years? If yes, what are the changes, and when did these changes occur?
2. What factors do you think are responsible for these changes, and why?
3. How has the changes you have experienced in the forest vegetation affected your forestry practices, livelihood decisions or the environment?
4. Have you experienced any government intervention to protect the forests, and if yes, what form of government intervention?
5. Is there any other thing you will like to talk about concerning agricultural land-use changes in Benue state?

#### **Community leaders**

1. What do you have to say about agricultural land-use change in this community?
2. What factors do you think are responsible for agricultural land-use change in your community?
3. In what ways do you think agricultural land-use change has affected your community, especially farmers?
4. In your capacity as community leaders, what have you done to mitigate the effects of ALUC in this community?
5. What has been the response of government in your community regarding the problem of agricultural land-use change

#### **Experts**

1. What is your perception of agricultural land use change in Benue state?
2. What factors do you think are responsible for the changes you have noted?
3. How do you think agricultural land-use change has affected farmers and agricultural productivity in Benue state?
4. What do you think government can do to mitigate the problem of agricultural land use change?

Thank you very much for your time