



# Farmers Perception and Adaptation to Climate Change – A Case Study of Sekyedumase District in Ghana

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## Introduction

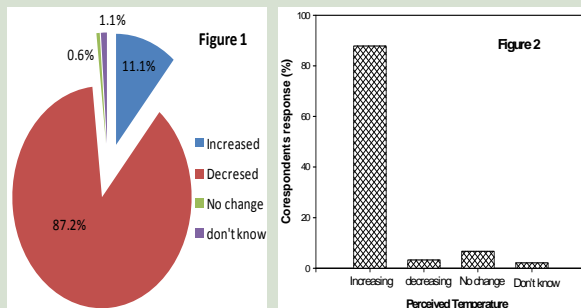
Climate change is expected to have serious environmental, economic, and social impacts on Ghana, particularly on rural farmers whose livelihoods depend largely on rainfall. To enhance policy towards tackling the challenges that climate change poses to farmers, it is important to have knowledge of farmers' perception on climate change, potential adaptation measures, and factors affecting adaptation to climate change. This paper presents the perception of farmers on changes in temperature and precipitation as well as the adopted adaptation measures in the Sekyedumase district of Ashanti region in Ghana.

## Methodology

180 farmer households were randomly sampled from four farming communities in the Sekyedumase district (latitude 7°22'N and longitude 1°21'W) in 2009. Farmers were interviewed to investigate whether they had noticed long-term changes in mean temperature, precipitation, and vegetation cover over the past 20 years. Questions about adaptation measures taken and the barriers to implementing them were also posed. The dependent variables (perception and adaptation) were analysed with respect to a set of explanatory variables using the logit model.

## Results and Discussion

Results (Figure 1 and 2) indicates, farmers are aware of climate change, as more than 80 % of farmers interviewed perceived an increasing temperature and a decreasing precipitation trend. Major adaptation strategies includes; planting short season varieties, crop diversification, changing planting dates and reducing land under cultivation. Land tenure, soil fertility, extension services and credit are significant determinants (Table 1) of adaptation to decreasing precipitation.



Farmers perceptions of change in precipitation (Fig. 1) and Temperature (Fig. 2)

Table1: Logistic regression of determinants of adaptation to decreasing precipitation

Adaptation	Coefficients	z	P>z
Age	-0.218	-0.79	0.432
Gender	0.815	1.85	0.064
Education level	0.040	0.34	0.734
Farm size	-0.225	-1.24	0.213
Land tenure	0.235*	1.99	0.047
Soil fertility	1.020**	-3.44	0.001
Access to extension	1.020*	2.57	0.010
Access to credit	2.076**	3.82	0.000
Farming experience	0.137	0.53	0.599
Ejura	0.907*	1.98	0.048
constant	-1.692	-1.54	0.123

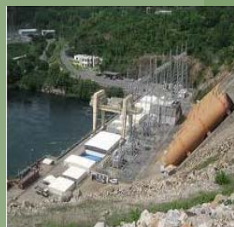
\*\* and \* are significant levels at 1 and 5%, respectively

## Conclusion

- Majority of farmers in the study area perceived changes in climate. However, only 44.4 and 40.6 % have adopted management technologies to counteract the adverse effects of increasing temperature and decreasing precipitation.
- Farmers who have access to credit, extension services, infertile land and own land are more likely to adapt to increasing temperature and decreasing rainfall.
- Major barriers to climate change adaptation are poverty, lack of or high cost of improved seed, lack of information on adaptation strategies etc.
- The policy implications are making credit facilities more accessible and flexible, investing in education of extension officers, and more education on climate change and the possible adaptation strategies.

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Source: annansi.com



Source: myjoyonline news



Source: newstimeafrica.com



Source: Michael Mensah



Source: mrdf.org.uk