

Ethnic Considerations of Choice of Livelihood Coping Strategies to Combat Climate Change and Variability: A Gender Perspective.

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ABSTRACT

Humans by nature make efforts to cope with climate variability and change, however, adaptation to climate change manifests in varied ways and forms. From an ethnic and gender perspective, this study examined the choice of livelihood coping strategies in the face of climate variability in the Kasena-Nankana Municipality and the Bongo District in the Upper East Region of Ghana.

The concurrent mixed method approach was used. A sample size of 312 rural farmers was involved in the study. Structured interview and Focus Group Discussions were used to collect data from respondents. Quantitative data were analyzed using Statistical Package for Social Sciences.

Findings showed that, ethnicity significantly influenced the kind of coping strategies adopted while gender did not. Women however, had limited capacities to cope with climate variability than men.

Mainstreaming gender and ethnic considerations into adaptation projects by District Agricultural Development Units in the study areas is recommended.

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INTRODUCTION

- The greater proportion of people in developing countries engage in livelihood activities relating to agricultural activities and therefore, greatly feel the impact of climate variability than the developed countries [1, 2].
- Although several researches have been conducted with regards to the impacts of climate change, such researches are not detailed about the potential role of smallholder farmers in their adaptation responses [3]. Most studies have tried to identify general patterns of coping rather than differentiating between agro-ecological zones, villages and types of households [4].
- In Ghana, most of the researches on adaptations are very general; with rare attempts at cross-comparisons between two different Districts or Traditional Areas of northern Ghana. Studies [5] have shown substantive evidence of climate variability and change in the region in which this study was conducted (the Upper East Region of Ghana).
- The main objective of this study is therefore to ascertain how ethnicity and gender influence the choice of livelihood coping strategies to deal with climate variability and change among rural farmers in the Kasena-Nankana Municipality and the Bongo District in the Upper East Region of Ghana.

MATERIALS AND METHODS

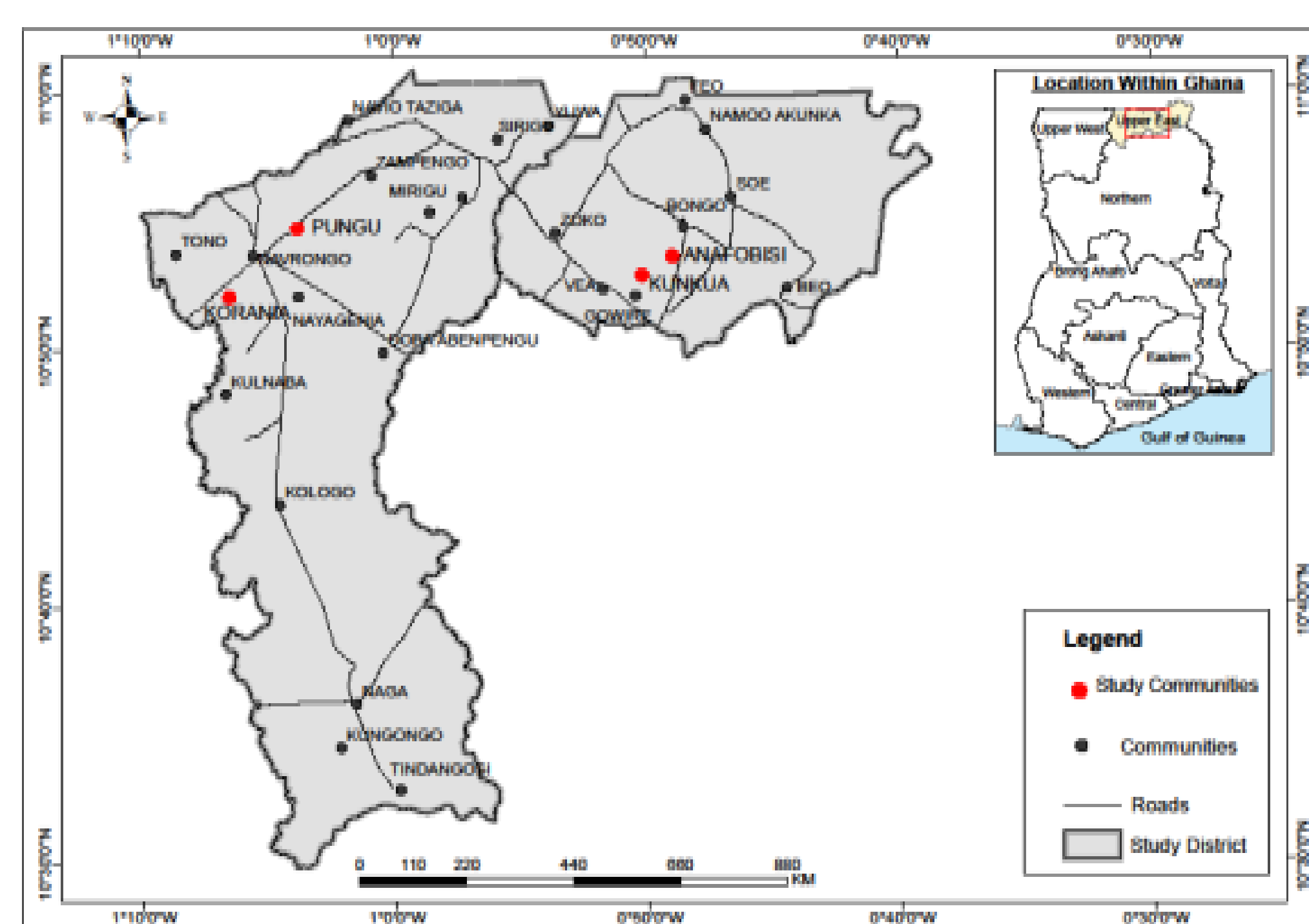


Figure 1. Map Showing the study areas

- The study employed the mixed method approach.
- Both qualitative and quantitative viewpoints, data collection techniques and inference techniques were combined.
- The sample frame was made up 1379 households in the four selected communities.
- A total sample size of 312 was obtained using the formula [6]
$$n = \frac{N}{1+N(\alpha^2)}$$
- Communities within the selected districts were stratified into North/East and one community each randomly sampled from each stratum. Each selected community was divided into North/East and appropriate number of households were randomly sampled from each stratum.
- Two focused group discussions were conducted in each of selected communities; men group and women group.

RESULTS

Indigenous livelihood coping strategies among rural farmers in the study areas.

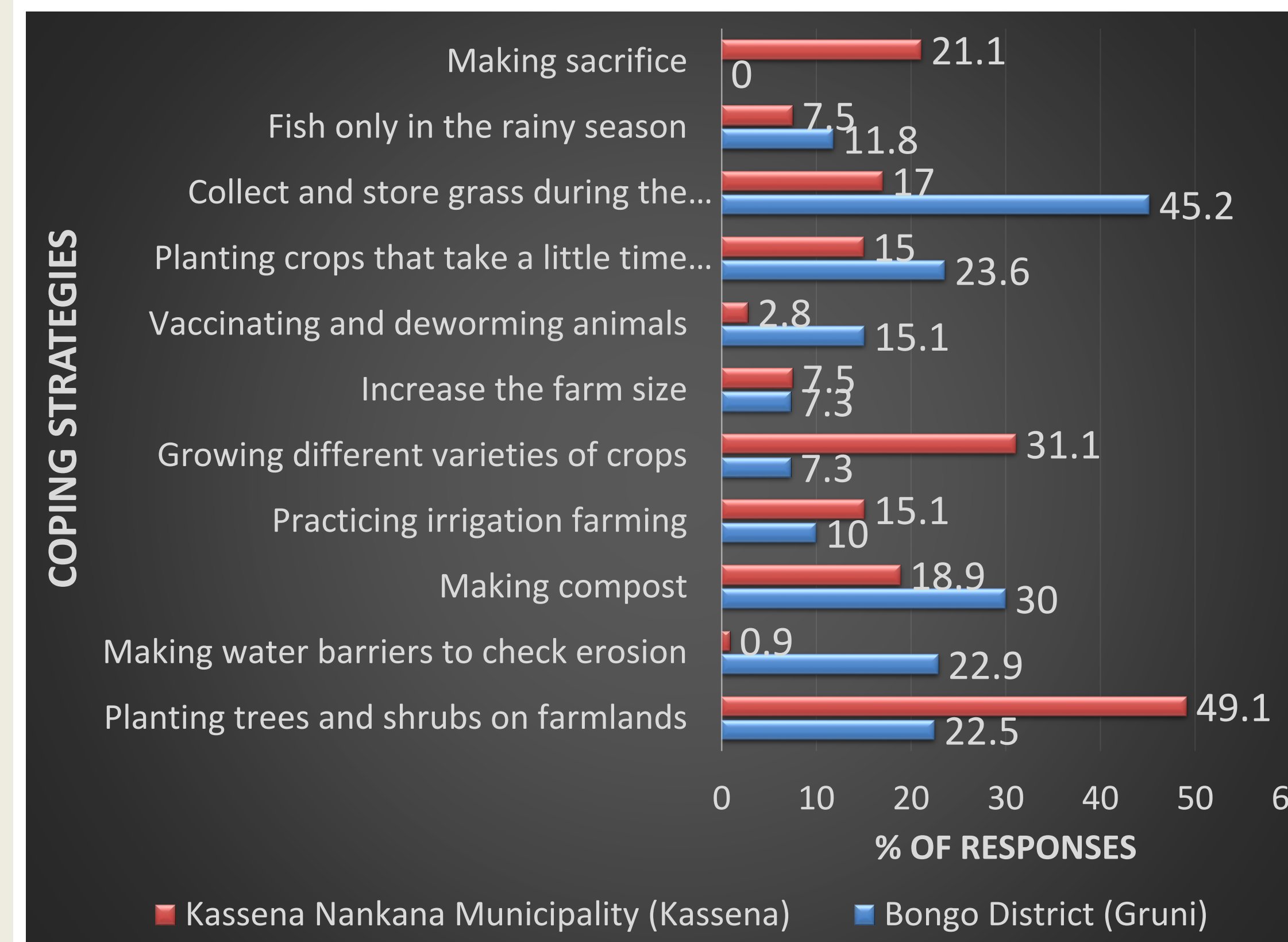


Figure 1: Coping Strategies Adopted by rural farmers (Author's Field Survey, 2016).

Effectiveness/efficiency of coping strategies adopted

- Respondents noted that, they cannot have full confidence in their strategies because they continue to experience the effects of climate variability despite making so much effort.

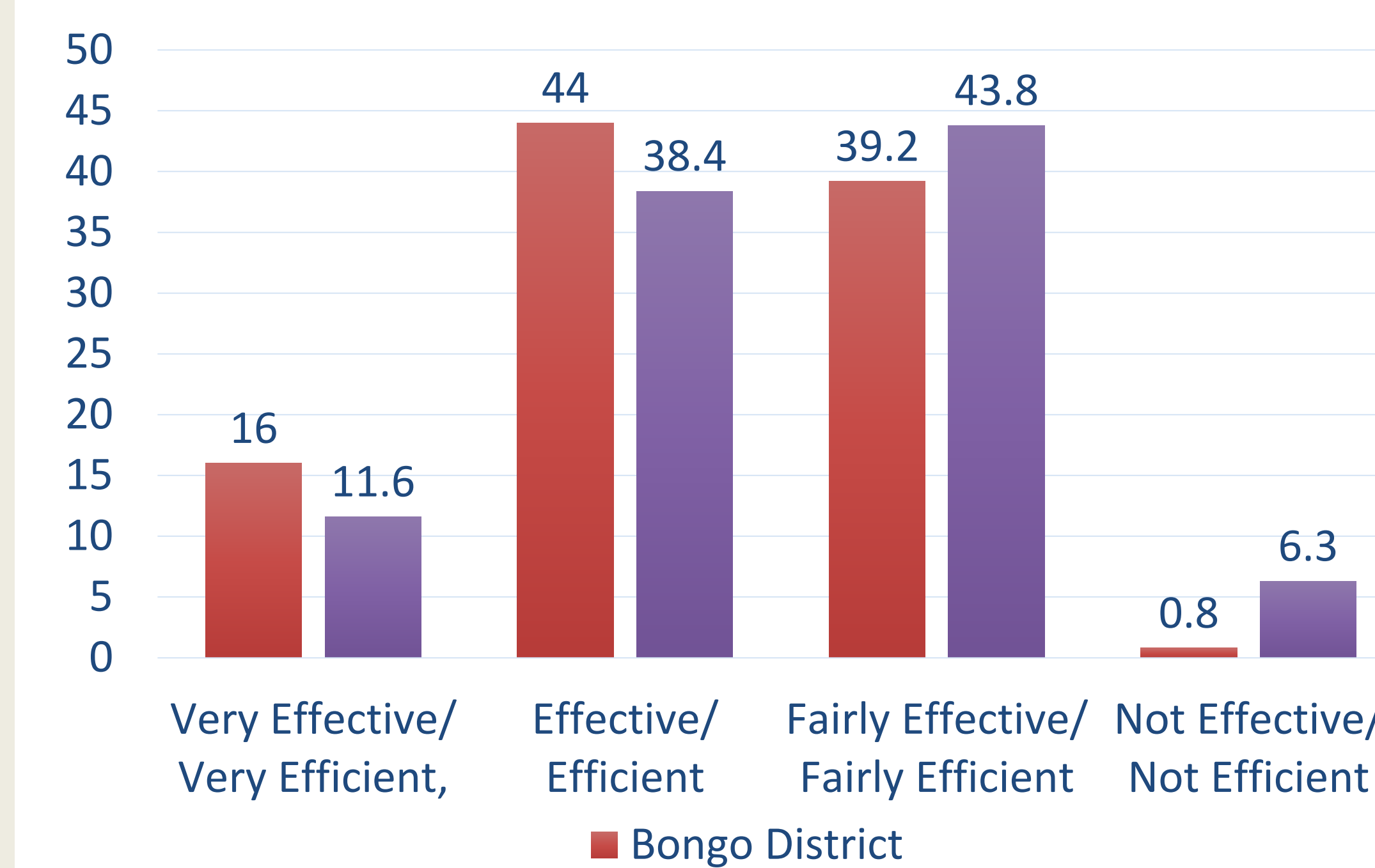


Figure 2: Respondents assessment of the effectiveness/efficiency of their strategies. (Author's Field Survey, 2016).

Gender and Adaptation to Climate Variability in the Study Areas.

- The study also revealed that gender plays little or no role in the kind of coping strategies adopted. Though, males and females adopted similar coping strategies, their ability to cope were not the same. One example of such differences in coping strategies was increasing the size of land cultivated.

- In almost all communities, female responses on coping strategies showed their ability being limited. A female participant asserted that;

".....we try our best to have our lives, but sometimes that support is not just there for us. I suffer with my children to farm, but this is always at the mercy of the rains"

- Another female participant stated that;

"...mostly the men are our leaders, so whenever help come, they get it. We try our best but I think they are well placed in coping with the current situation than us"

RESULTS CONT'D

Statistical Relationships Between Ethnicity, Gender and Coping Strategies

Table 1: Relationship between Ethnicity and Coping Strategies

Coping Strategy	Pearson Chi-Square	Asymp. Sig. (P-value)
Planting trees and shrubs on farmlands	16.82	0.00
Making water barriers to check erosion	25.45	0.00
Making compost	3.61	0.57
Practicing irrigation farming	1.28	0.26
Growing different varieties of crops	19.71	0.00
Increase the farm size	0.00	0.95
Vaccinating and deworming animals	11.93	0.00
Planting crops that take a little time to mature	2.55	0.11
Collect and store grass during the rainy season	16.90	0.00
Fish only in the rainy season	0.91	0.63
Making sacrifice	-	-

Table 2: Relationship between Gender and Coping Strategies

Coping Strategy	Pearson Chi-Square	Asymp. Sig. P-Value
Planting trees and shrubs on farmlands	0.58	0.45
Making water barriers to check erosion	3.49	0.06
Making compost	0.39	0.53
Practicing irrigation farming	0.12	0.73
Growing different varieties of crops	0.59	0.81
Increase the farm size	0.79	0.36
Vaccinating and deworming animals	0.16	0.69
Planting crops that take a little time to mature	0.97	0.33
Collect and store grass during the rainy season	4.41	0.04
Fish only in the rainy season	0.20	0.65
Making sacrifice	0.87	0.35

Author's Field Survey, 2016

CONCLUSION AND RECOMMENDATION

- From the findings, it can be concluded that, ethnicity influences the kind of coping strategies adopted while gender does not. Women however, have limited capacities to cope with climate change and variability than men.

- It is essential for local government authorities and non-governmental organizations working in key areas of climate change adaptation to make efforts to mainstream ethnic and gender considerations into adaptation programs aimed at improving rural livelihoods.

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