

## The Influence of Gender and Land Tenure on Smallholder Farmers' Adaptation to Climate Change

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### Introduction

- Land rights are essential for land tenure security and climate change adaptation.
- The land tenure literature has not sufficiently explored land rights, particularly from a gendered perspective.
  - This study explores land tenure systems of male and female farmers; assesses their climate change perceptions and adaptation strategies; investigates the influence of land tenure and climate change perceptions on their adaptation.

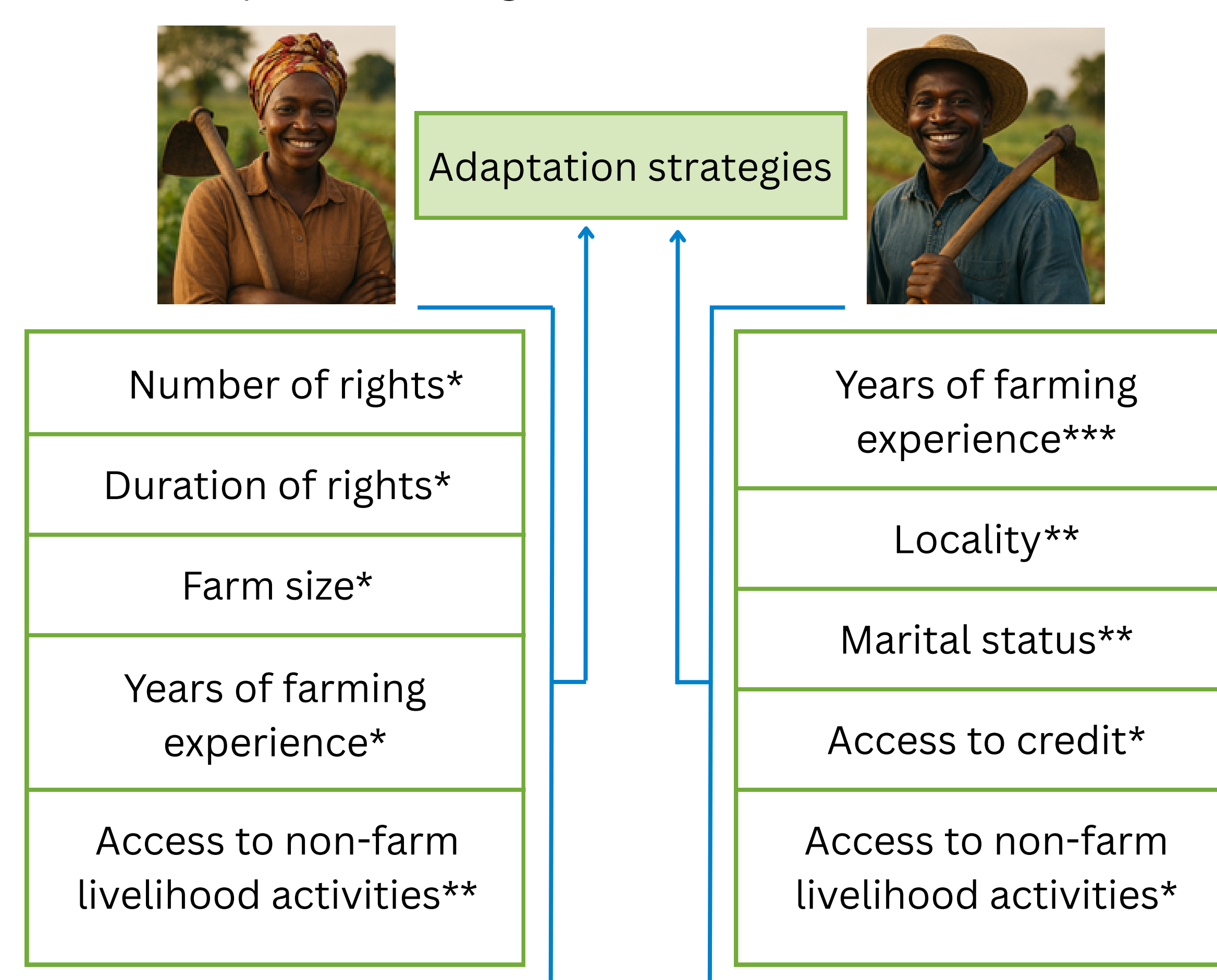
### Methods

- In Ghana's Adansi North District 510 farmers were randomly selected from four communities.
- Data was collected through a survey using Kobo Toolbox.
  - Farmers were asked about the rights they exercise on farmland (access, management, withdrawal, exclusion and alienation), duration of rights, farm size, formal documentation on land, climate change perceptions/experiences and adaptation strategies.
- Data was analyzed from 505 respondents using means, standard deviations, chi square and logistic regression. Specific regression models were computed for men and women.

### Results

- Of the respondents, 59% are male and 41% female.
- More men (58%) have formal land document, larger farm size (mean = 6.8 acre), longer duration of rights and exercise greater rights than women.
- Women often exercise basic rights (access, management and withdrawal rights) while men exercise exclusion and alienation rights in addition to basic rights.
- Apart from the frequency of pest invasion ( $p = 0.042$ ), both men and women have similar climate perceptions and experiences.
- Apart from crop-diversification ( $p = 0.015$ ), crop-livestock integration ( $p = 0.026$ ) and storing seeds ( $p = 0.015$ ), both men and women have implemented similar climate adaptation strategies.

Figure 1. Different factors influence male and female farmers' climate adaptation strategies



Note. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ . The images were created with Microsoft Copilot.

### Discussion and conclusion

- Men and women exercise different levels of land rights, affecting their tenure security.
- Different factors differently affect men's and women's climate adaptation strategies.
- Targeted policies must create enabling conditions and incentives for land tenure security (e.g., designating protected land banks) by working with local/traditional authorities to promote fair allocation.
- Climate information services must address the specific needs of men and women to enhance their adaptive capacity.



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