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“Reconcile land system changes  
with planetary health”

## The influence of gender and land tenure on smallholder farmers’ adaptation to climate change

PETER ASARE-NUAMAH<sup>1</sup>, DAVID ANAAFO<sup>2</sup>, TINA BEUCHELT<sup>3</sup>

<sup>1</sup> *University of Bonn, Center for Development Research (ZEF), Germany*

<sup>2</sup> *West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL), Interfaces, Burkina Faso*

<sup>3</sup> *University of Bonn, Center for Development Research (ZEF), Ecology and Natural Resources Management, Germany*

### Abstract

Climate change poses severe threats to agriculture in Africa, limiting the content’s potential for improved agricultural productivity and food security. Addressing climate change challenges and improving resilience in agriculture through adaptation requires a critical attention to issues of gender and land tenure in smallholder farming systems. This study assesses the nexus between gender, land tenure and climate change adaptation. Specifically, the study seeks to achieve these three objectives: 1. Explore land tenure systems of male and female farmers from the perspectives of land rights, robustness and duration of rights; 2. Assess climate change perceptions and adaptation strategies of male and female smallholder farmers; 3. Investigate the influence of land tenure and climate change perceptions on smallholders’ adaptation to climate change. Data were collected from 505 smallholder farmers in the rural Adansi Asokwa District in Ghana through questionnaire survey. Data were analysed through basic descriptive (frequency, percentage, cross tabulation and chi square) and inferential (correlation and binary logistic regression) analyses. The results show that while male farmers exercised more land rights than female farmers, there is no association between gender and land rights. However, there is an association between gender and farm sizes, as women ownership and access to farm lands diminishes in the case of larger farms. In the case of climate change perceptions, except the frequency of pest invasion where there is a significant association based on gender, there is no significant difference in male and female farmers’ perceptions of climate change. The results further show a significant gender difference in the adaptation strategies of male and female farmers, particularly crop diversification, crop-livestock integration, storing seed, with men more likely to practice these adaptation strategies. Specific to land tenure, farmers’ adaptation strategies are significantly influenced by access, and withdrawal rights as well as gender, years of farming experience, locality, access to other livelihood activities, and marital status. Land tenure policies must address challenges with land rights, particularly access and withdrawal rights as they influence farmers’ land investment decisions.

**Keywords:** Agriculture, climate change, food security, gender, land rights