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“Reconcile land system changes
with planetary health”

Dynamics of climate change, land scarcity, and gender in northern Ghana’s food and land systems

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Abstract

Gender plays a critical role in shaping sustainable land management and development outcomes, especially in Sub-Saharan Africa. Climate change is increasingly affecting agricultural production and threatens to undermine progress made in the past years. Drawing on case studies from Northern Ghana, this paper examines the nexus of gender, sustainable land management, and climate change, asking a) how gendered norms and roles shape the adoption of sustainable land use practices under climate change, (b) how land availability influences gendered access to land, and c) by exploring pathways to enhance gender equity in research and innovation processes. Employing an inter- and transdisciplinary qualitative research approach, data were collected through sex-disaggregated focus groups, semi-structured interviews with male and female farmers, multi-stakeholder workshops, and participant observation.

Findings show that social determinants—such as age, marital status, ethnicity, and religion—influence women’s access to land and other resources, their decision-making and farm innovation. Despite women’s central role in agriculture, further systemic barriers—including patriarchal norms and customary laws—impede their access to land and agricultural inputs. Extreme climate events like the 2024 drought intensify these constraints, particularly for widows, separated women, and those in polygynous households. Land scarcity further exacerbate the situation. These gendered inequalities heighten women’s exposure to economic but also to physical violence.

The research underscores the urgent need for gender-transformative policies that address both formal and informal land rights, challenge discriminatory norms, and prevent gender-based violence. It calls for a restructuring of institutions through integrating intersectional, inclusive and equity-based approaches in both research and policy. Co-design, social learning, and collaboratively developed theories of change present promising avenues for institutional transformation beyond the farmer level. Nonetheless, bridging the

persistent knowledge–behaviour gap across science, policy, and practice regarding the advancing of gender equity within land and food system transformations remains a critical challenge warranting further implementation research.

Keywords: Adoption, climate-smart practices, gender, innovation, intersectionality