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Coping and social cohesion mechanisms in addressing climate change and land degradation in Ghana

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Abstract

The West Africa sub-region is faced with major interlinked challenges in ensuring sustainable livelihoods in the context of climate change and land degradation. To ensure sustainable food production and resource use, agriculture needs to be resilient through the application of responsive adaptation and coping strategies. While many studies have explored coping and adaptation strategies employed by farmers, little attention has been paid to the farmers' indigenous practices and the role of social cohesion mechanisms.

Using the sustainable livelihood framework, this study addressed this gap by exploring coping strategies and social cohesion mechanisms used by smallholder farmers in northern Ghana. It made use of a mixed-method approach, including a household survey, focus group discussions, expert interviews, field observations, and key informant interviews. Data was collected from 60 households in 6 communities across 3 districts in the study region.

The results showed that social assets such as membership of a self-help group were the most important source of coping, particularly for the most vulnerable households. Such membership enabled farmers to secure micro-loans and receive aid from fellow members during extreme climate events such as floods. Farmers' tacit knowledge emerged as pivotal in coping with climate change and enhancing soil fertility, encompassing traditional weather forecasting, the making of biopesticide, and sustainable land management practices such as ridge and bund creation and intercropping. Key coping practices reported by the study participants included reduction of food consumption, off-farm jobs, selling livestock, charcoal making and reliance on remittances.

The results further revealed that social cohesion plays a key role in helping farmers cope and adapt to climate change while improving soil fertility. Social cohesion is mainly reflected in two different structures depending on gender. While diverse challenges of innovation adoption exist, socio-cultural barriers differ by gender. The study recommends the integration of farmers throughout the innovation development process and propose the need for a concerted effort to strengthen land tenure security policies, ensuring equitable access to farmlands for all genders.

Keywords: Adoption, climate change, social cohesion, sustainable land management