

## APPROACHING CLIMATE CHANGE RESILIENCE IN NORTH-WEST GHANA

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### OVERVIEW

North-west Ghana is highly vulnerable to climate change and variability. However, high levels of poverty and poor mainstreaming of climate change policies/strategies are constraining resilience building.

Climate change constitutes a critical challenge for agrarian livelihoods in the Global South. Rising temperatures, erratic rainfall, flooding, droughts, and dry spells negatively affect farm yields. In Ghana, the northern regions are the most vulnerable to climatic changes as most households maintain an agrarian livelihood with a high dependence on rainfall. The situation is particularly pronounced in the north-western part (Sawla-Tuna-Kalba district and the Upper West Region) of the country. Meteorological records for the area show that temperatures have been rising since 1970 (Jarawura et al., 2024). Also, rainfall is increasingly variable with consequences such as long spells, droughts and floods. Meanwhile, the region has a unimodal rainfall regime that concentrates the risks in one season instead of two as in the forest and transitional ecological zones in Southern Ghana. The climate situation is compounded by persistent and high levels of poverty which diminishes the adaptive capacity and resilience of local farmers. Building resilience against climate change in semiarid north-western Ghana is therefore an imperative. This policy brief explores conceptual perspectives on resilience and their implications for building resilience in north-west Ghana.



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### KEY MESSAGE

- The concept of resilience is inherently value-laden, political, and contested. It is thus imperative that researchers and policymakers clarify and acknowledge trade-offs related to questions of resilience to what, and for/by whom.
- North-western Ghana is among the most vulnerable to climate change with poor capabilities to build resilience.
- While climate change policies/strategies have been developed at the national level, their operationalization at the regional and district levels is poor.
- Exploring a social transformation approach is essential for building resilience.

## WHAT IS CLIMATE CHANGE RESILIENCE

The concept of resilience has evolved over the years since Holling characterized it as “the persistence of relationships within a system and a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and persist” (Holling, 1973, p. 17). Holling's conceptualization of resilience implies the ability of a system (for example society) to renew, innovate, and reorganize itself in the face of perceived and real threats without losing its basic functioning. Since Holling, resilience thinking has altered and morphed into a broader discussion of how processes and functions of socio-ecological systems (SES) fluctuate, transform, and return to original or new states in response to both internal and external mechanisms (Côté & Darling, 2010). Extant literature shows that while there is a persistent conceptual fuzziness associated with the resilience terminology resulting in apparent conceptual tensions, there are increasing points of convergence.

There is much consensus that a resilient system is one that:

1. Learns to live with change and uncertainty.
2. Nurtures diversity in its various forms to increase the options for coping with shocks and stresses.
3. Combines different types of knowledge for learning and particularly as an effective strategy for bridging scales to stimulate learning and innovation.
4. Create opportunities for self-organization and cross-scale linkages.

In the context of north-west Ghana, while there is agreement that resilience is crucial to sustainable development, the nature of the aforementioned key elements and how to approach them still defy unanimity. For example, the value of local knowledge and land tenure security for both men and women has been ignored for a long time and is only now receiving some attention (Aschenbrenner et al., 2021).

## HOW TO ACHIEVE RESILIENCE: ADAPTATION AND TRANSFORMATION

Following the lack of agreement regarding attaining community resilience, we follow Folke et al. (2010) perspective to contend that, probably, for agrarian communities or households such as those in north-west Ghana to become resilient, two key qualities namely: adaptability and transformability should be extant. First, adaptability should be viewed as embodying people's ability to manoeuvre with their responses to changing external threats and internal processes in ways that would permit the current development to proceed within the expected trajectory(ies), that is 'stability domain' (Folke et al., 2010, p. 2). Furthermore, adaptability to these rural actors would represent their capability within a system to influence and positively enhance their resilience.

This means that farmers would have to develop the ability to innovate and reorganize their livelihoods to meet threats such as climate change, declining soil fertility, or price shocks. Thus, adaptability is a function of the ability to perceive and understand changes in climate and deploy countermeasures to safeguard livelihood. By contrast, transformability is defined as “the capacity to create a fundamentally new system when ecological, economic, or social structures make the existing system untenable” (Walker et al. 2004, p. 5). For example, when an agrarian region moves to a resource-extraction economy. Transformability involves shifts in perception, meaning, and changes in institutional setup.

## CONCLUSIONS

Consistent with theoretical perspectives, poor government policies, especially in the agricultural sector, and institutional weaknesses constrain people's ability to build resilience. Agricultural policies are largely considered unsuitable for the largely illiterate and smallholder farmers.

While formal institutions have been ineffective in engineering and implementing climate-related policies and plans, and general infrastructure, local institutions generally do not provide enabling conditions for the majority of people, particularly women, to access the resources needed to build resilience.

## RECOMMENDATIONS

To achieve resilience in a sustainable manner, collective action from national government, local government, civil society and NGOs, and local communities would be the way forward. We put forward the following specific recommendations to researchers and policymakers in dealing with the conceptual challenges and operationalization of climate change policies/strategies:

- Embrace broader and dynamic definitions of resilience with a focus on the points of convergence.
- As resilience is inherently value-laden, political, and contested, researchers and policymakers must clarify and acknowledge trade-offs related to questions of resilience to what, and for/by whom.
- Social transformation is key to understanding the processes and strategies of resilience and should be given attention.
- More research must be conducted with the aim of better understanding key aspects of adaptation and resilience such as; climate models, identity, core values, and worldviews, institutions, agencies and actor groups.
- Explore loss and damage dynamics related to climate change to better understand the limits of adaptation.

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