

ASSAR is a research project being undertaken in the semi-arid regions of Africa and Asia, examining the dynamics and drivers of vulnerability, while exploring ways to enhance the resilience of people, local organisations and governments. ASSAR aims to promote climate adaptation policies and practices that are effective, widespread and sustainable. In West Africa, ASSAR focuses on the dry sub-humid band that extends from the Upper West Region of northern Ghana through to southern Mali, referred to as the Wa-Bobo-Sikasso transect.



KEY POINTS

- Climate change policy has to be driven by the reality on the ground.
- The successful coping strategies that local communities use to respond to climate change need to be taken into consideration in the design of national adaptation processes. Climate interventions that do not align with people's needs may be unsuitable.
- West Africa's dryland region has long and misleadingly been labelled as "the Sahel", perpetuating the image of a relatively homogeneous entity. In reality, the region hosts an enormous variety of biophysical environments intertwined with highly contrasted socio-economic, demographic and land-use conditions. This diversity indicates that there can be no single adaptation strategy for all circumstances, but rather that varied and flexible adaptation strategies are necessary.
- To reduce vulnerability, agricultural intensification aimed at supporting increasing food demands will require sustainable natural resource management.
- Agricultural intensification produces winners and losers. It is important to address possible inequitable development outcomes by fully examining the processes that increase food security, and taking into consideration how different social groups are affected by these processes.

Context

This briefing note summarises the key findings from the Regional Diagnostic Study (RDS) recently conducted in Ghana and Mali, as part of the ASSAR project. The RDS aimed to:

- ◆ Develop a systematic understanding of existing knowledge of climate change trends, impacts, vulnerabilities, and adaptation strategies.
- ◆ Identify the key barriers and enablers of effective adaptation in semi-arid regions.
- ◆ Identify gaps in research, policy and practice related to climate change adaptation.
- ◆ Provide a foundation for developing an integrated regional research program (RRP) on climate change vulnerability and adaptation.

What is climate vulnerability?

ASSAR views climate vulnerability as comprising three conditions:

- ◆ how likely it is that people will be exposed to climatic hazards;
- ◆ how sensitive people are to the hazards they experience;
- ◆ and the degree to which people are able to cope and adapt to these hazards in order to avoid or mitigate harm.

In **rural areas** of West Africa, vulnerable groups include: low-income households engaged in fishing, farming, and pastoralism; non-diversified farmers, such as cotton farmers in Mali; and migrant workers (Simonsson, 2005). In **urban areas** vulnerability is largely defined by lack of access to regular employment, inadequate and unsafe housing, and poor or absent urban services related to water, sanitation and health. Vulnerability also manifests through **migration**, as female-headed households left behind by migrant male labourers and relatives do not always receive remittances from migrants¹.

Barriers to and enablers of adaptation to climate change

The barriers and enablers identified during the RDS reflect a wide array of actions that different institutions and actors are taking (e.g., decentralization of government authority, actions that conserve or overexploit the natural resource base, inclusion or exclusion of different land users, new policy levers) that have clear implications for constraining or promoting adaptive capacities and adaptation outcomes. **Important barriers and enablers to adaptation comprise development, gender and governance dimensions.**

BARRIERS

Development

- ❖ The inadequate integration of land management and water resource planning – particularly at watershed and river basin scales – which hinders the management of the negative impacts of water extraction on downstream users.
- ❖ The high dependency on donor communities for funds to implement adaptation projects.
- ❖ The extensification of agriculture onto drought-prone soils and grasslands, which reduces the access of pastoralists to pastoral corridors and generates herder-farmer conflict in many regions.

Gender

- ❖ High labour burdens and inadequate access to education constrains women's ability to diversify their livelihoods.
- ❖ Limited livelihood and/or technologic options constrain women's range of responses for managing risk and adapting to change.
- ❖ Traditional gender norms that manifest in unequal access to production resources and decision-making processes.
- ❖ The predominance of male migration that leave vulnerable groups, including women, youth and disabled dependents, exposed to both climatic and non-climatic shocks, particularly where remittance flows are weak or missing.

Governance

- ❖ Government decentralization challenges that render transfers of authority to local governments incomplete.
- ❖ Top-down policy interventions for managing natural resources that lack local incentives and lock local communities out of resource access.
- ❖ The lack of land tenure security that demotivates land users to adopt new practices, and the traditional land tenure system that marginalizes smallholders.
- ❖ Inadequate communication and coordination within national level institutions and across national to district scales.
- ❖ Ineffective mechanisms or limited funds for implementing national adaptation policies.

ENABLERS

Development

- ❖ Research agendas that increasingly emphasize participatory processes for knowledge co-generation.
- ❖ The increasing adoption of early-maturing crop varieties, though there are risks in relying too heavily on these varieties given inter-annual climate variability.
- ❖ Appropriate technologies for soil and water conservation, natural resource management, etc., that are gaining greater prominence.
- ❖ Improvements in the channelling of weather information to local communities.

Gender

- ❖ Adaptation provides an entry point for better addressing the needs of differentially vulnerable groups, though local input is essential to ensure sustainability of the effort.
- ❖ Youth are more educated and engaged in environmental education and awareness-raising, therefore contributing to a more favourable context for adaptation.

Governance

- ❖ A significant increase in national policy development around climate change.
- ❖ Leadership that is emerging in key ministries.
- ❖ Increasing evidence of mainstreaming of climate into different sectoral policies and strategies.
- ❖ Traditional authorities and religious institutions are viewed as credible sources for mobilizing actions on adaptation.

¹ Simonsson, L. 2005. *Vulnerability profile of Burkina Faso. Poverty and Vulnerability Programme. Stockholm Environment Institute.*

Way forward

The next phase of ASSAR (Regional Research Programme; RRP) in Ghana and Mali will build upon the RDS findings briefed in this document. The RRP will consist of an in-depth field investigation of the biophysical, governance, institutional, social differentiation, gender and knowledge-sharing aspects around the identified barriers, enablers and knowledge gaps. It will look at these aspects through the lens of agricultural intensification-adaptation interface in a dynamic and complex development context.

Institute for Environment and Sanitation Studies

University of Ghana, P.O. Box LG209, Legon, Accra, Ghana
Tel: +233 302 962 720 (Secretariat) · Tel: +233 302 512 819
Fax: +233 302 512 681 · Email: infoiess@ug.edu.gh

ICRISAT

Centre Régional Afrique de l'Ouest et du Centre
BP: 320 Bamako, Mali

Tél: +223 20 70 92 00 · Cell: +223 76 12 09 45 / +223 66 12 09 45