

Supporting farmer resilience in semi-arid areas in Ghana – through action research

TRAINING AND DIALOGUE SESSION ON CLIMATE CHANGE AND GOVERNANCE: GENERAL TRENDS AND AFRICAN COUNTRIES

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Outline

Background - the ASSAR Project

Approaches for sharing knowledge towards making impact

- Grant for Local Adaptation Support (GLAS)
- Scenario-based capacity building (SBCB)
- Climate Advisory Resource Centres
- Adaptation Hub Mobile App
- Climate Change Adaptation through Youth Innovation (CATYI)

General outcomes and Lessons



Our research themes

Our regional teams worked in a coordinated manner in order to develop a systemic understanding of the processes and factors that impede adaptation and cause vulnerability to persist.

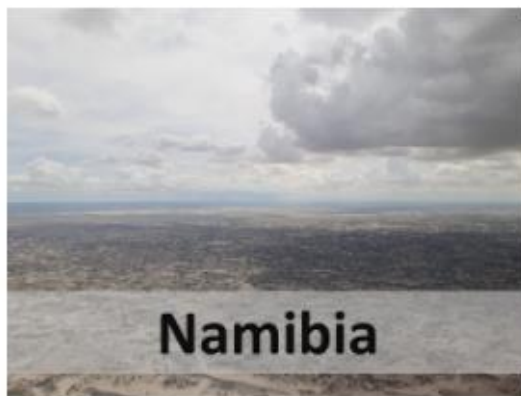
[Read more about our research themes](#)

Working in semi-arid regions of India, and East, Southern and West Africa, case studies were focused on regionally-relevant, socio-ecological risks and dynamics relating to livelihoods, and resource access, use, and management.

Our study areas



Botswana



Namibia



Ethiopia



Kenya



Ghana



Mali



Karnataka, India

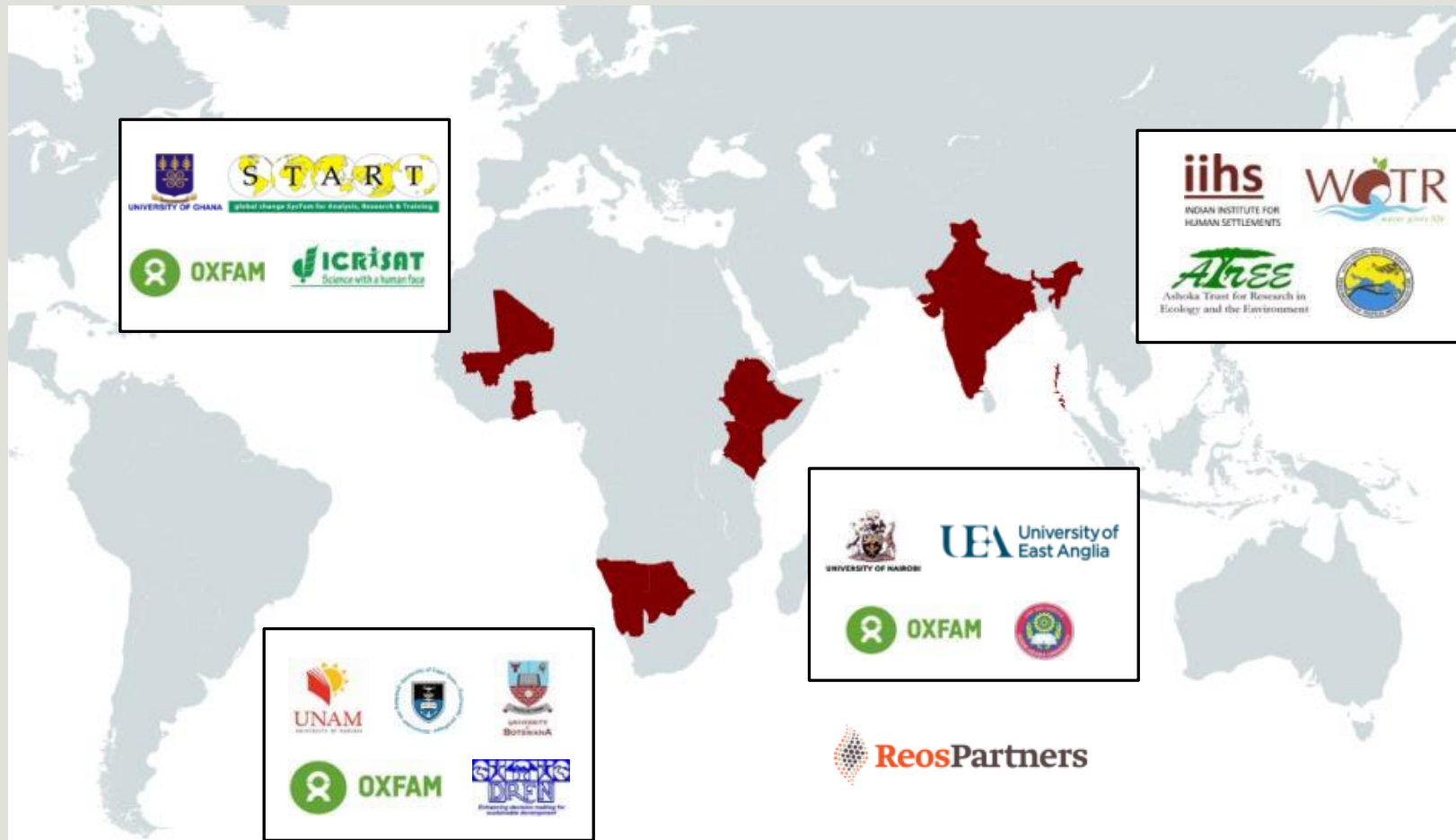


Maharashtra, India



Tamil Nadu, India

Adaptation at Scale in Semi-Arid Regions (ASSAR) Project - Consortium



Upper West Region – Lawra and Nandom Districts



Key Focus

80% of households are smallholder farmers

How are people adapting to climatic & non-climatic changes in the Upper West region, especially in relation to food security & given trends toward agricultural intensification?

What are the barriers & enablers of adaptation, particularly as these link to water, migration, land tenure, livelihoods, farm production & marketing?



What we did



Regional Diagnostics Studies (RDS)

4 workshops; 2 National and 2 Local level engagements



Transformative Scenario Planning (TSP)

3 workshops: 2 regional and district level engagements



Regional Research Plans (RRP)

20 Field Research: 17 students and 3 core team research



Research into Use (RiU) Activities

4 Activities: 2 Capacity Building and 2 SOG (competition & App)

What we found

3 categories of Barriers and Enablers to climate change adaptation in Semi-arid Ghana;

- *Development*
- *Gender*
- *Governance*

2 Issues and 5 Strategies to food security in Upper West region.

- *Issues; water & political commitment*
- *Strategies: Food, smart water, market system, DDR & ecosystem management*

Key results from field research are related to; *migration options, vulnerability of different social groups, institutional capacities, food security, ecosystem services and management, livestock management and adaptation strategies.*

4 Key RiU stakeholder engagements implemented;

- *GLAS: Support for local women groups*
- *SBCB: Support dry season irrigation farmers*
- *CATYI: Support for youth innovation in schools*
- *Adaptation HuB: Mobile App for engagement*

Using Transformative Scenario Planning to think critically about the future of agriculture and food security in the Upper West Region of Ghana

AN OVERVIEW



Using Transformative Scenario Planning to think critically about the future of agriculture and food in the Upper West Region of Ghana

March 2022 www.assarhub.org

The five-year ASSAR project (Adaptation at Scale in Semi-Arid Regions, 2018-2023) uses insights from multi-scale, interdisciplinary work to inform and transform climate adaptation policy and practice in ways that promote the long-term wellbeing of the most vulnerable and those with the least agency.


Transformative scenario planning in Ghana is the Upper West Region of Ghana, there are pressing challenges for agriculture and food. These include climate variability, food insecurity, and resource scarcity; overexploited water in small, arid, semi-arid, and arid areas; and the loss of political commitment.

To bring fresh thinking on how to tackle these challenges, we turned to Transformative Scenario Planning (TSP) – a process developed by Peter Petersen that brings together stakeholders from diverse and often conflicting perspectives and encourages their thinking around complex issues. In so doing, TSP helps people to imagine the ways that the future can be changed, and to identify the leverage points that can facilitate this change.

During two TSP workshops in the June and December 2020, stakeholders identified the key driving forces that might influence agriculture and food security in the Upper West Region from now until 2035. They then developed four possible visions of the future, and an action plan that could lead to greater agriculture and food security in the region.

KEY POINTS

- The TSP process is a shared, thought-provoking exercise designed to identify the driving forces that could trigger a positive future in the agriculture system in the Upper West Region.
- We identified seven drivers and political commitment as the enablers of future agricultural security.
- We used the future scenario to develop Vision 2035 – a shared vision of how food and agriculture can be improved – and identified key actions that need to be implemented to achieve this vision.
- Ultimately, we hope that by building understanding, setting common goals, and advancing a cross-sector understanding, we can ensure that resources are mobilised to support the most vulnerable agricultural systems and improve regional food security.

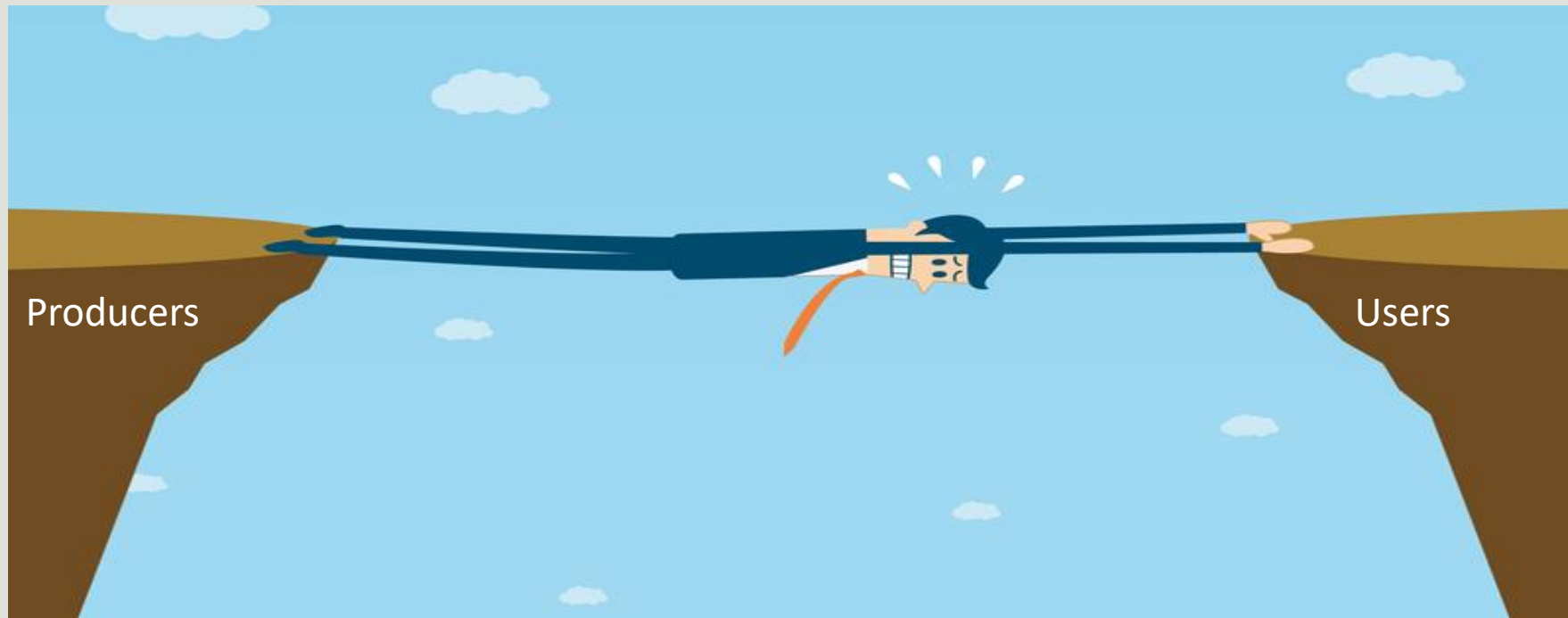


Act to Transform the System

To move towards Vision 2035, participants were encouraged to think critically about their own roles, as well as their collective role as a group. They split themselves up according to action areas that they are most interested in helping to carry forward, and compiled preliminary ideas for concrete actions that could be instrumental to this process. ASSAR's Ghana team is now working with these groups to find the best means of putting these ideas into action.

| | | |
|---|--|--|
| <p>Disaster risk management</p> <p><i>develop early warning systems; develop and enforce bylaws for bush burning and tree cutting; establish rewards for best practice; sensitise and educate; train disaster management volunteer groups; encourage risk management activities</i></p> | <p>Sustainable food and livelihood empowerment</p> <p><i>increase access to improved seeds; develop water harvesting methods; subsidise farm inputs, tools and equipment; encourage organic farming; improve livestock production and market linkages; agro-processing (e.g. shea and groundnut oil)</i></p> | <p>Improved market system</p> <p><i>communicate market dynamics and pricing to more people; create a support system for traders and producers; improve market structure and security; improve radio broadcasts; give farmers advice on pricing, planting and rainfall; improve road networks and transportation (especially to villages); improve product quality to compete with international imports</i></p> |
| <p>Ecosystem management</p> <p><i>encourage tree planting; encourage farmer-managed natural regeneration and woodlots; develop an anti-bushfire campaign; improve agronomic practices; enforce bylaws; preserve sacred groves; develop capacity of wildlife officers and community members</i></p> | <p>Climate-smart water management</p> <p><i>plan integrated water-resource management (IWRM) for the Black Volta Basin (that considers the Upper West Region); prioritise areas that need urgent intervention and management; develop guidelines for climate-smart water infrastructure (dams, dugouts, wells, boreholes)</i></p> | <p>Disseminate Vision 2035</p> <p><i>mobilise resources; regional focal points; communicate and publicise Vision 2035; collect contributions and feedback; finalise</i></p> |

Knowledge brokering



“Knowledge brokers link the producers & users of knowledge to strengthen the generation, dissemination & eventual use of that knowledge.”

How do we get from
knowledge to changes in
policy, in society, and in
action? How can we help
change to happen?

1. Grant for Local Adaptation Support (GLAS)

Women farmers contribute 80% of household food needs, yet their decisions, land access & land tenure security constrained by patriarchal customs & institutions → reduced ability to adapt

Self-help groups an important social safety net, but often limited in number & lack the needed capacity, skills & opportunities



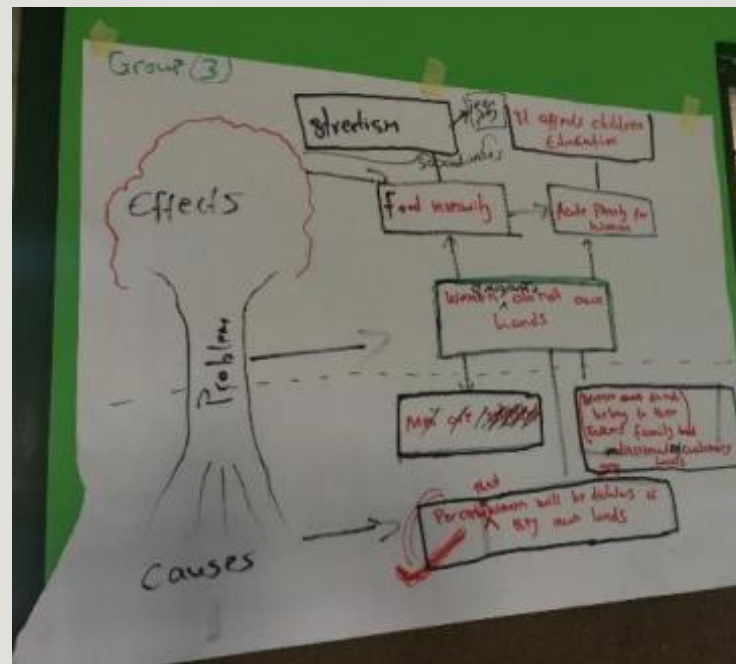
ASSAR Grant for Local Adaptation: Provided support to provide rural women with: (i) skills in eco-inclusive livelihoods and business models, (ii) access to climate information & (iii) advocacy skills to engage on issues that affect women.

Target: 30 leaders of self-help groups

In collaboration with NANDIRDEP (local NGO), Centre for Indigenous Knowledge and Organisational Development (CIKOD), business advisory centres (BACs), and planning & gender desk officers



Training: LEAN Business Canvas to test the validity of new business ideas & revive existing ones through value addition, branding, effective customer targeting & marketing



Activity: Problem tree analysis for top three environmental problems, followed by listing of advocacy goal(s), objectives & workplan , & discussion of importance of coalition, networks & partnership

Outcomes:

- Women-based platforms now registered at district level
- Linked with financial institutions & Business Advisory Centres to access credit
- Capacity to train others



2. Scenario-based capacity building (SBCB)



Workshop to strengthen irrigation management practices for dry-season farming (in collaboration with Dept. of Agriculture (DoA))

“What hinders dry-season farming? What are solutions? Who must do what?”

Most pressing: low ratio of agriculture extension officers to farmers and poor organisational structure of farmer associations

DoA & Ghana Irrigation Development Authority to provide technical support; researchers to provide info; need for well-run farmers' association



Outcomes

- Initiate formation of irrigation farmer association at district level
- Strengthened network between farmers & technical experts (& input dealers)
- Dry-season farming advisory (climate-resilient agronomic & water management activities)



Irrigation Water Users Association Regulation 2016 (Legislative Instrument 2230) was created to encourage farmers on public irrigation schemes to form Water User Associations. These associations are set up **to operate, maintain and manage the irrigation infrastructure and ensure the efficient distribution of water to members** within a defined service area. Up until now, they have only been implemented in southern Ghana.



“This workshop has helped to emphasize the need for strong associations, not only for farmers but also for input dealers. As an input dealer, I understand the need to work with strong and recognized irrigation farmer associations in the district, rather than individual farmers, which comes at a high risk. Even with a poor harvest, I know that my investment is safe with the risk shared across members.” – Input dealer

3. Climate Advisory Resource Centres (CARCs)

Partnership between national and local govt, University of Ghana and NANDIRDEP

Digital information centres for training farmers and extension officers on adaptation, water management & agronomic practices

Two locations per district; mobile extension unit

>50 instructional videos on different crops (vegetables, legumes and cereals) grown in the region, compost making & use, agro-chemical use, land preparation, seed selection, water management, crop harvesting & storage, marketing, etc.



4. Adaptation Hub Mobile App



In Ghana, use of smart phones increased by 120% over the past few years & >1/3 of Ghana's population are considered active internet users

Target: extension officers, community development workers, researchers & students in Northern Ghana

5. Climate Change Adaptation through Youth Innovation (CATYI)

Competition for senior high schools to raise awareness & promote solutions about local climate and environmental challenges

Promoted dialogue and information exchange among students and enhanced their capacity to identify and communicate local adaptation issues

Finals: three schools, six teams

Criteria: (i) validity of arguments with clear linkage of environmental/climate issue to specific ASSAR theme(s)
(ii) clear recommendations/solutions with a view of innovation



Follow up activities

Expand CARCs into other districts, translate material into local language, train more community leaders as CAPs & extension personnel; increase reach to women & youth with hubs on alternative livelihoods & new farm technologies; increase exchange between “users” & “producers” (**DIGITAL project: follow-up funding secured by IDRC**)

4 out of 80 proposals accepted by Africa-EU Innovation Alliance for Water and Climate to enhance capacities of farmers, extension officers & input dealers to manage water resources during droughts & dry spells (participatory scenarios)



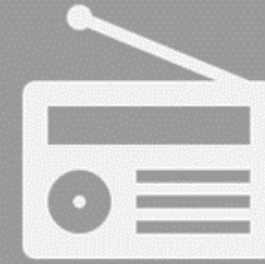
To expand the reach of digital agricultural services to support climate smart actions that improve rural livelihoods in Ghana

KEY OBJECTIVES

- 1) To expand the reach of learning hubs to offer novel opportunities for meaningful engagement to **socially differentiated groups of smallholder farmers** in Ghana,
- 2) To strengthen the capacity of **knowledge providers** to transfer information to local users through new communication and outreach tools
- 3) To strengthen the capacities of **local leaders** to address cultural barriers that act as barriers to uptake of climate smart information by local users.



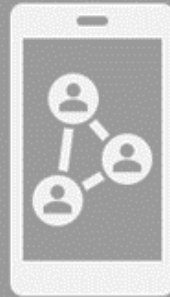
- 2 Climate Advisory Resource Centers
- 2 Climate Information Resource Centers



- 1 Interactive Radio programming
- 5 Local community produced songs



How are doing this ?



- 1 mobile App that connect SHs to researchers
- 3 social media dissemination campaigns



- 4 Community women listening groups
- 1 Community Learning lab





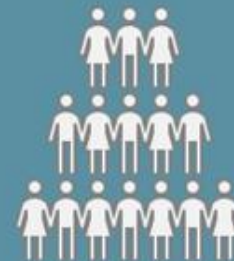
Gov't Agencies

- Department of Agric
- Department of planning
- Department of information



NGOs

- Farmer based NGOs
- Gender based NGO



Community Groups

- Women groups
- Farmer groups



Who are we working with ?



Community Leaders

- Traditional Authority
- Community Champions



Schools

- Environmental Clubs
- Teachers



External Partners

- Advisory Org. eg Oxfam
- Funders





Some Outcomes

- Stronger links between previously unfamiliar stakeholders at local & district levels
- Evidence about group & individual capacities to effect change with regard to strengthening adaptation
- New ways of thinking & working: using evidence-based research to boost positive impacts on adaptive capacities of vulnerable populations → national policy



Some Lessons

Building relationships with stakeholders - continuous engagement, inclusion of voices & perspectives, prioritisation of needs – laid the foundation for everything to follow

Empowering women requires the creation, formalisation & strengthening of existing women groups through participatory approaches that also work with men to create support for the adoption of adaptation responses

Researchers have a role to play in acting on the recommendations that emerge from their work, e.g. assisting to increase delivery of weather, climate & adaptation info to vulnerable communities



Read more

Blogs:

- Improving irrigation systems for smallholder farmers in Ghana ([link](#))
- ASSAR supports dry season agriculture in semi-arid Ghana with Climate Advisory Resource Centres ([link](#))
- Adaptation Hub: using mobile apps to support agriculture and adaptation planning in semi-arid Ghana ([link](#))
- Ghana climate research reaches deep into farming communities ([link](#))
- Climate change adaptation through youth innovation ([link](#))
- Young climate innovators share award-winning adaptation ideas at University of Ghana ([link](#))
- Women, work and adaptive capacity: enhancing the adaptive capacity of vulnerable women ([link](#))
- Promoting climate justice and adaptation in semi-arid Ghana ([link](#))
- Workshop promotes sound financial management to enhance women's livelihoods in Ghana ([link](#))



<https://bit.ly/2jU4axm>



THANK YOU FOR YOUR ATTENTION