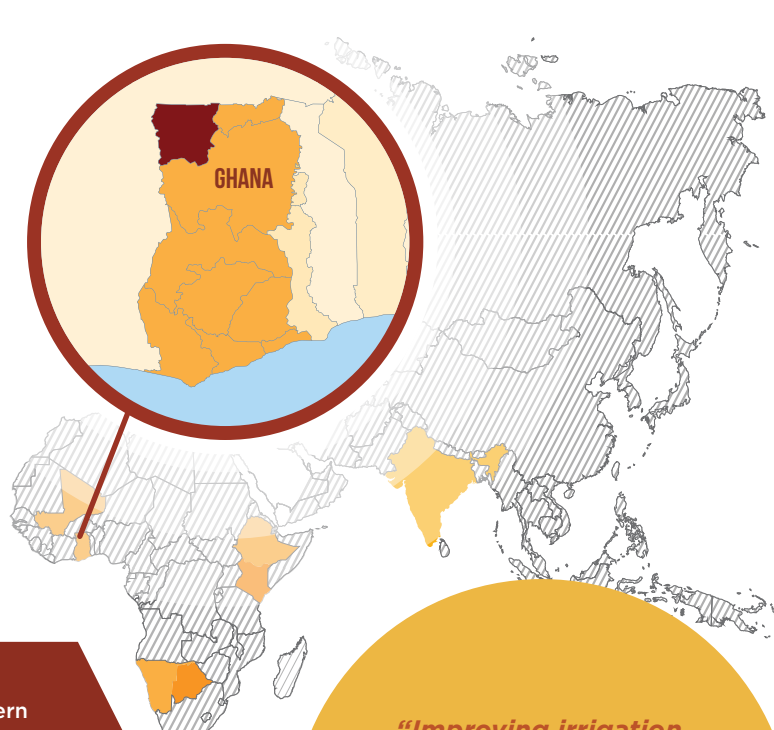


SUPPORTING RESILIENT AGRICULTURE IN SEMI-ARID GHANA



Lawra and Nandom Districts, located in the semi-arid northern region of Ghana, are water scarce for half of the year, meaning households have to carefully manage their food security. Climate change is increasing the risk of longer dry periods in the near future. To manage this risk, some farmers migrate to southern regions of the country during the dry season to earn a living. Others participate in dry season farming with scarce water availability and face additional challenges like limited access to extension services.

In response to the difficult climatic conditions in this region, the ASSAR team sought to strengthen the capacities of vulnerable communities in Lawra and Nandom Districts to practise dry season gardening through smart water management. By building capacity that strengthens irrigation management practices and creating advisories to support dry season farming, ASSAR hoped to promote year-round farming and limit farmers' risk.

"Improving irrigation systems for smallholder farmers is key for resilient agriculture in semi-arid Ghana."
- Participant, Oxfam Influencing Workshop (2017)

ASSAR'S TRANSFORMATIVE SCENARIO PLANNING (TSP) PROCESS:

Identified access to water and political commitment as key drivers affecting the future of agriculture and food security. Strategies that emerged from the TSP workshop included smart water management and better irrigation techniques.

ASSAR RESEARCH SHOWED:

01



Farmers who engage in dry season farming have less household food insecurity and are less likely to migrate.

02



Dry season farming contributes to improved economic wellbeing of households and reduces their vulnerability to droughts.

03



Those involved in farmer-based organisations and supported by NGOs and state institutions are more likely to implement adaptation strategies.

ASSAR'S SCENARIO BASED CAPACITY BUILDING INITIATIVE

In collaboration with the Department of Agriculture (DoA), the scenario-based capacity building workshops brought together key stakeholders in the region: farmers, input dealers and technical experts. This enabled discussions around ways to enhance food security and the livelihoods of vulnerable farmers, especially during the dry season. The workshops also helped build useful networks between farmers and experts, and led to the emergence of several practical initiatives to help improve the lives of farmers in semi-arid Ghana.

1. NETWORKING OPPORTUNITIES

At the workshop, Charlotte Kuzah (Agricultural Extension Officer, Nandom) met with farmers and input dealers. She was able to hear the farmers' concerns and discuss the problems they face with dry season farming. They discussed potential solutions and took part in a field demonstration on strengthening irrigation management practices, such as correctly setting up drip lines. Farmers talked directly to experts from GiDA (Ghana Irrigation Development Authority), DoA, the Planning Unit of the District Assembly, and NGOs. They discussed soil management, inadequate finances, poor market linkages and limited access to information.

The low ratio of agricultural extension officers to farmers and the poor organisational structure of farmer associations have been pressing issues in the region.

The capacity of Charlotte Kuzah was improved through the farming advisories and instructional videos that the workshop provided, and which are now accessible in the new Climate Advisory Resource Centres. She recognizes that she can now offer a better service to farmers in this region:

"Whether maize, tomatoes, okra, or any crop at all, I will have a background knowledge on it and I'm going to actually do my best for my farmers."
- Charlotte Kuzah, Agricultural Extension Officer, Nandom

"This is the only project I've seen that will benefit both farmers and extension officers, at the same time." - Extension officer, Lawra



2. ESTABLISHMENT OF IRRIGATION FARMER ASSOCIATIONS AT DISTRICT LEVEL

The Irrigation Water Users Association Regulation 2016 (Legislative Instrument 2230) was created to encourage farmers on public irrigation schemes to form Water User Associations under the supervision of GiDA. 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. At the workshops farmers were given copies of relevant legislation, they simulated necessary processes,

and farmer group leaders committed to organise regular meetings with climate advisory personnel to discuss matters arising.

"The initiative has come at just the right moment and I can see the development of lead farmers who are going to their communities and to their schemes, to go and educate their other colleague members who are there." - Fidelis Abu Bang-Era, Upper West Regional Agronomist, GiDA/Irrigation Technologies.

3. CLIMATE ADVISORY RESOURCE CENTRES (CARC)

The CARCs are digital information centres for training farmers and extension officers on climate change adaptation, water management and agronomic practices (such as which crops to grow for the dry season, types of soil, chemicals to apply, etc.)

Two CARCs have been established in each district - one within the district offices of the Ministry of Food and Agriculture and one inside an input dealer shop. They have been equipped with a resource library of farming advisories, a directory, a television with more than 50 instructional videos, a mobile extension unit (to bring the videos to the farm level) and a telephone. A Memorandum of Understanding has been signed between the University of Ghana, Department of Agriculture, the NGO NANDIRDEP and input dealers for the use, maintenance and sustainability of CARCs. Climate Advisory Personnel were chosen for each district to help coordinate the use of the Centres. Extension Officers have been able to upskill

using CARC resources, and farmers can call their local CARC to ask questions and gain feedback about any farming issue that arises.

"We can have access to information about what is happening regarding challenges we are facing in our gardens during the dry season." - Kpirko Wenceslas, dry season farmer, Nandom.

Farmers are also able to make use of the centre, which is especially helpful where there are few extension officers:

"The number of extension officers in the district is very small compared to the number of farmers in the various communities. This centre will enable farmer group leaders like us to bring our groups to learn more about climate change and how different crops can be effectively cultivated with limited water." - Farmer group leader.



4. 'ADAPTATION HUB' MOBILE APP

Mobile technology is a great way for farmers, extension officers and researchers to share knowledge central to effective adaptation and planning. Harnessing the use of mobile technology, the team developed an app that provides an efficient way for farmers to receive up to date, relevant information around smart water management, sustainable food and livelihoods, disaster risk reduction, market systems and ecosystem management.

Recently, mobile usage has increased rapidly in Ghana, which means that NGOs such as NANDIRDEP in Ghana can use the information while they are in the field.

"Due to the nature of our work where we move from community to community, we don't need to look for a computer before we get the information we need to support our farmers. We can now conveniently access it on our phones."
- Director of Operations, NANDIRDEP

ASSAR focussed especially on training extension officers who were more likely to have the skills and access to technology that is needed to use and disseminate information from a mobile app.



NEXT STEPS

IN ORDER TO TAKE THIS INITIATIVE FORWARD, THE ASSAR TEAM HOPES TO COLLABORATE WITH LOCAL GOVERNMENTAL AND NON-GOVERNMENTAL PARTNERS TO FURTHER SUPPORT DRY SEASON FARMERS BY:



Translating instructional videos shown in CARCs into the region's most widely spoken local language: Dagaare



Diversifying the services provided by CARCs (e.g. covering a wider range of issues, alternative livelihood trainings, improving value chains)



Expanding CARCs into other districts of Upper West Ghana



Training more community leaders as Climate Advisory Personnel and extension support volunteers to help provide credible climate information and extension services to vulnerable farmers in the region



Providing mobile climate advisory services (by extension officers)



Formalising input dealers into a recognised platform

For more information and to get involved:

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"I'm sure that with this intervention going forward, irrigation development in Lawra and the Nandom area will be given a face-lift."
- Fidelis Abu Bang-Era, Upper West Regional Agronomist, GiDA/Irrigation Technologies