Walker INSTITUTE

BRAVE

Social Science Activity Report

Feb 2019

BRAVE PROJECT IMPLEMENTATION REPORT – BURKINA FASO

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DATE: February 2019

This report highlights key activities of the BRAVE project with the communities in Burkina Faso. It highlights the project's approach, key activities, impacts, and challenges, and makes suggestions of how to improve on this methodology.

CONTEXT AND AIM

This short report aims to provide an update on BRAVE's activity progress in Burkinabé's communities so that the team can be up-to-date and maximize benefits of the project over the next three months.

ACTIVITIES

Partners and stakeholders

In Burkina Faso the BRAVE team works closely with ChristianAid Sahel, a member of the consortium, and its national partners Réseau Marp (Ouagadougou) and UGF/CDN (Union des Groupements Féminins/CE-Dwane-Nyee). BRAVE is additionally supported in Sanguié Province by the radio station (*La Voix du Sanguié*) and the local communities.

Pre-information collection

Pre-information relating to groundwater and community characteristics was collected rapidly through qualitative questionnaire. Based on the project objectives and discussion with IRC (and the PDRA in Burkina Faso), four locations in Sanguié Province were proposed by Réseau Marp: Tomo, Kado, Poa and Zhilvolè.

Scoping visits and location selection

At the start of the project, with support from the University of Ouagadougou, the BRAVE team travelled to Sanguié Province to visit potential communities for participation. These sites were already established by Christian Aid's partner, Réseau Marp. The four communities mentioned above (Tomo, Kado, Poa and Zhilvolè) were visited over the course of two days to assess their suitability. In addition, preliminary information about the impact of changing climates on groundwater and adaptation strategies was collected. Sources of water, groundwater extraction strategies, the perception of groundwater quality and the availability of climatic/meteorological information were also assessed.

Each community had at least one well, with Poa and Tomo having multiple. Two types of hand-dug well were found: small (≤ 1m ø) and large (≥1.5m ø) diameter. Small wells are excavated by community members whereas, in most cases, larger wells are provided to communities through development projects. Boreholes were also found which served multiple purposes (e.g. providing agricultural and drinking water, beer production (dolo), and brickmaking) but are primarily used for drinking water. These are also mostly from development projects. For instance, in one garden in Tomo, two large boreholes were provided to the community in a previous Réseau Marp project - the "DRYDEV Programme" (https://drydev.org/where-we-work/burkina-faso/). Communities indicated that mid-April to May constitutes a critical period of the year as most wells will dry up, leading to a decrease in water availability.

Climatic and meteorological information, mainly relating to rainfall amounts, is accessed by the community through national radio, but they reported this to be unreliable.

Baseline assessment

In April/May 2016, a social science postdoctoral researcher from the University of Reading, IRC, Réseau Marp, and UGF/CDN conducted a baseline survey on a field visit. A household survey and three focus groups were conducted in each village. This baseline survey:

- Characterized households
- Assessed water-use
- Identified challenges in accessing water
- Established an agricultural calendar
- Mapped organizations and stakeholders acting in each community
- Identified climate change coping strategies

This data was examined using SPSS software and sent to the University of Reading team

Location selection for following activities

Following the investigations, two locations were selected with the aid of partners to implement the remaining BRAVE initiatives. Locations were selected based on the level of groundwater use, district location and geographical contexts. Tomo and Poa were selected (see Fig. 1) as they are similar to Kado and Zhilvolè respectively.

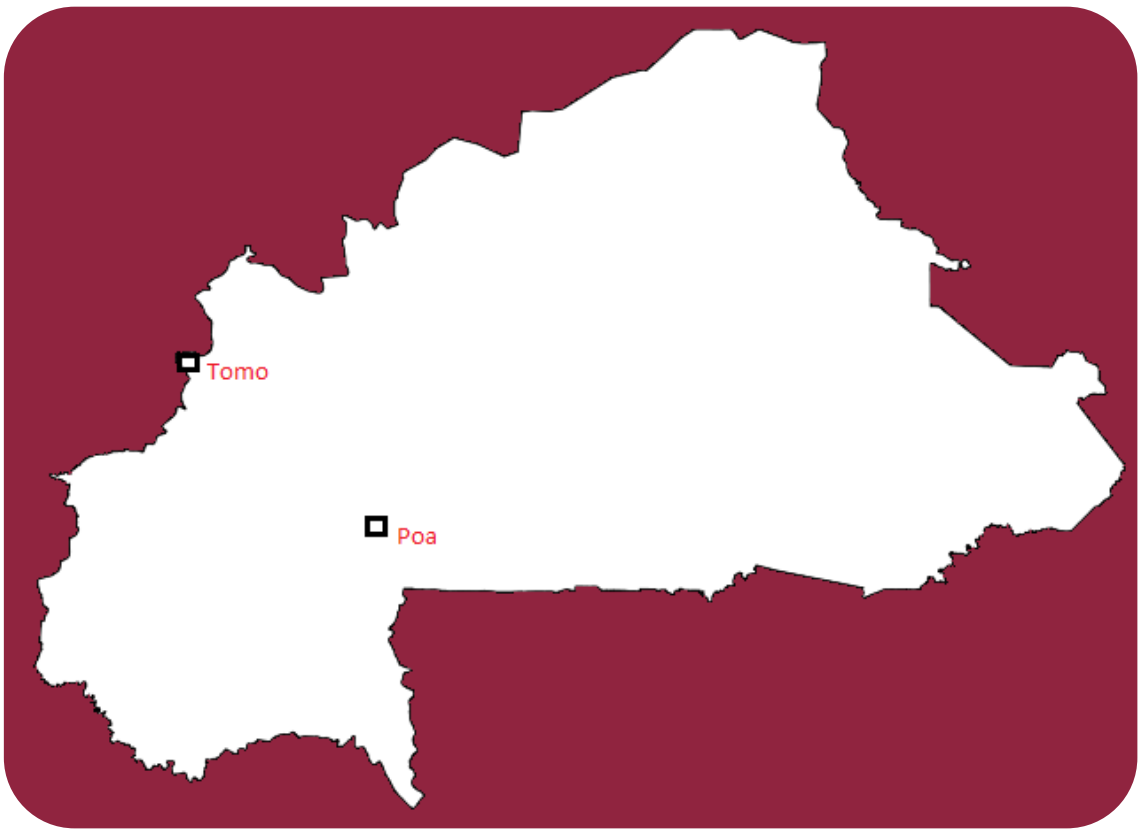

Fig. 1. Map of Burkina Faso showing the two locations selected for subsequent BRAVE work.

GROUNDWATER MONITORING NETWORK

Setting up a water resources monitoring network

In June 2016, a groundwater and rainfall monitoring network were established in two gardens in each of the two communities. This consisted of a weekly measurement of groundwater level (gwl) and daily measurements of rainfall amount. In addition,

when rainfall exceeded 30mm for any single day, the gwl was recorded the following 3 days. In Tomo, two large wells and one small well have been monitored whereas in Poa two large and two small wells were monitored. One person in each community, recommended by UGF/CDN, was trained to do the monitoring.

Expanding the water resource monitoring network

The gwl monitoring network was expanded in each community after recommendations from the BRAVE physical science research team. This expansion increased the number of monitored wells, the numbers of gardens monitored and added monitoring water abstraction from wells. Another garden with 2 additional wells was added in both Poa and Tomo. One additional well was added to a garden in each district. Six wells were monitored from the two gardens at Tomo. Seven wells were monitored at Poa, five in two gardens and two in the village. However, one well completely dried up and no longer worked.

Table 1. Current water resource monitoring status

Location	Monitored Wells	Manual Rain Gauges	Gardens with daily water abstraction monitoring
Tomo	6	1	2
Poa	6 (7-1)	1	1
Combined	12	2	3

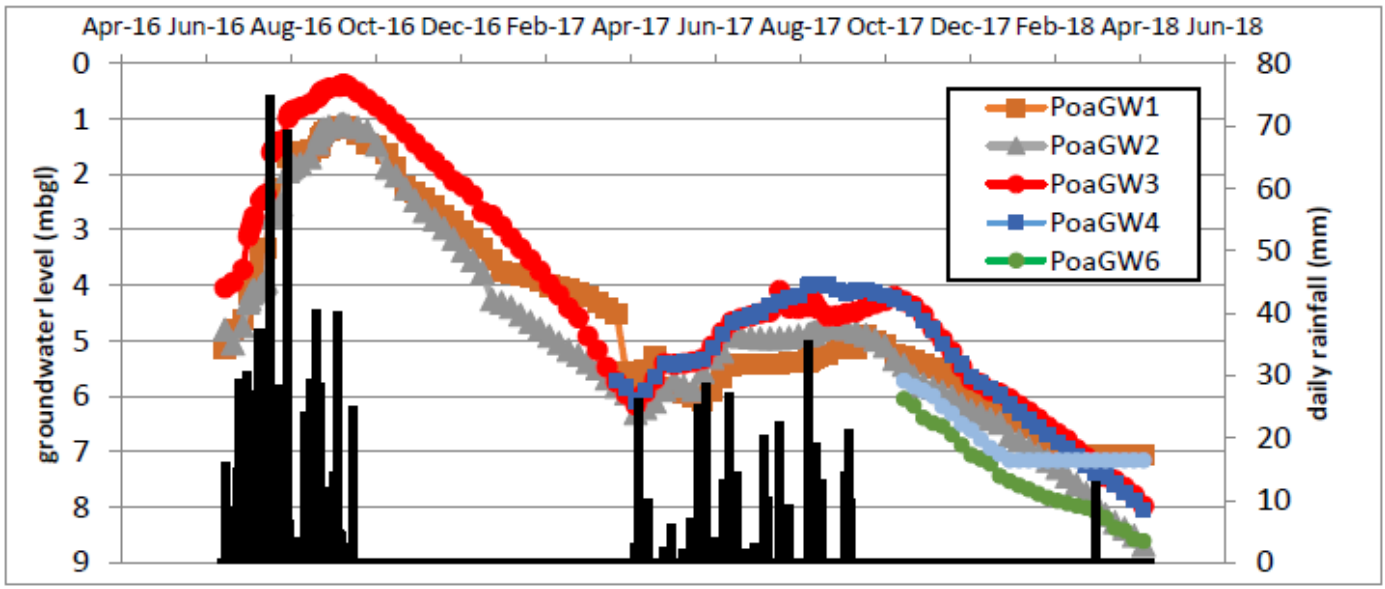

Fig. 2. Groundwater and rainfall trends in Poa (Brave, 2018). June to September is the major rainfall period.

GARDENING ACTIVITY PLANNING IN COMMUNITIES

In communities, gardening is one of the major activities. A crop-oriented seasonal calendar has been developed and can be seen in Table 2. The main fertilizers used are NPK and Urea. The three main crops are onion, aubergine and cabbage. Minor crops include, tomato, pepper and sorrel.

Overall, the major crops are grown over the same period year-on-year with small deviations. Onion can be grown twice a year by some gardeners – the second growth period is called a “short campaign”

Table 2. Gardening seasonal calendar in the communities studied by BRAVE in Burkina Faso

Location	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Tomo												
Poa												

Legend	
	Onion
	Cabbage, Tomato
	Cabbage, Aubergine
	Aubergine

RADIO LISTENING PROGRAMME (RLP)

A two day community workshop to plan for the RLP was conducted in Réo, the main city of Sanguié province. This was attended by community leaders, UGF/CDN, agricultural extension services, local radio (*La Voix du Sanguié* or 'the Voice of Sanguié'), the Lorna Young Foundation (LYF), Christian Aid, Réseau Marp and IRC. In this workshop, major themes and topics of interest were selected and discussed further. LYF aims to utilize the Farmer Radio Approach, linking into Farm Radio International through AfClix. The RLP aims to share new evidence-based tools for water management with communities, local decision makers and regional policy makers.

The RLP was set up in April, 2018, prior to the rainy season to allow the communities to share and implement resilience strategies. Prior to the outset, an RLP training session was conducted in Northern Ghana with the participation of Réseau Marp, UGF/CDN and local radio. The radio communication method allows all farmers access to these techniques, farmers from a range of socio-economic backgrounds were selected to participate in the meetings (see Fig. 3). The RLP process includes four key steps: preparation, training, setting and broadcasting. The programme runs over the course of a year aiming to improve four aspects of local agricultural practices:

- Sustainable Land Management
- Water Harvesting and Conservation of Resources
- Health and Nutrition
- Yields

Fig. 3. First radio listening programme meetings in Poa and Tomo, April 2018.

A mid-way review was conducted in August 2018 by Réseau Marp and IRC. A reflective diary form provided by the Walker Institute was utilized. This matches with the user guide for radio learning groups which were also provided by the Walker Institute. IRC translated these materials into French for accessibility. This was appreciated by members of the programme who considered the RLP a key factor in the newfound success of their agricultural projects (see Fig. 4.)

Fig. 4. Sorghum farm of radio listening group participants from Poa. Short crops in the foreground are those without the RLP practices applied.

CHALLENGES

Groundwater monitoring

Abstraction monitoring had to be stopped in one of the gardens in Tomo due to difficulties encountered by the monitor. There were too many individuals coming to collect water and many were not setting stones aside as required to count their abstraction.

Garden activities

It was observed in the gardens of both Poa and Tomo that onions were damaged by pests in 2018 (see Fig. 5). This occurred during the first growth period of onions (August). This left onions yellow with either no bulb at all or a minor bulb. Many gardeners stated this was the first year they witnessed this adverse effect.

Fig. 5. Pest attack on onions: Poa (Left), Tomo (Middle and Right).

RLP

A meeting was held at the Réseau Marp office in early February, to discuss RLP progress and challenges. At this stage, 18 radio broadcasts out of 48 (planned) ran effectively. Most took place during the growing season. The programme, and its impacts on crop development, were appreciated by participants.

Suggestions for future work

Following the meeting at Reseau Marp in early February, a few suggestions have been made for improvements/further work:

- Reseau Marp, Christian Aid and IRC (in collaboration with local partners) are to conduct an end of season assessment in the last week of February 2019 and propose a new plan for the next three months.
- A meeting with all partners involved in the radio listening programme will be held in Réo, the main town in UGF/CDN. Participants will include Reseau Marp, Christian Aid, UGF/CDN and the radio station "La Voix du Sanguié"
- Technical briefs on the character of rainfall and groundwater in the concerned communities will be produced.

Partnership

Synergies between WaterAid and BRAVE are still pending, especially concerning the West Africa Regional Learning Centre. This was initiated by BRAVE's physical science team with support from the social science team.

CONCLUSIONS

This short report gives an overview of the BRAVE project activities on the social sciences site in the Sanguié district in Burkina Faso. It can be noted that rainfall and levels to groundwater manual monitoring network has been set. The radio listening programme is ongoing. However, challenges related to the integration of Rainwatch information into this emission exist.

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