

PARES Case Study of Engagement & Involvement for Resilience

Case Study Title: **Sierra Leone, Water Insecurity, Universities as enablers**

Country/location: Sierra Leone, Eastern Province, Kailahun District, Bunumbu

Crisis/challenge type: Water Security

Contact researcher (for more information):

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PARES Domain illustrated by this case study:

Learning and Capabilities: University researchers triggered local reflection and learning from the past history of the collapse water supply system.

RECOMMENDED ACTIONS

Community: Use local knowledge to tackle health problems.

NGOs/health programs: Listen to local people's experience and needs and response to these.

Data for this case analysis

Household Census, In-depth interviews, focus group discussions, observations and Key Informant Interviews (KII) in Bunumbu, Kailahun District.

Key Message

University researchers can act as enablers or facilitators for local learning by eliciting their remembrance of past experiences. In this case, the gathering of past history of water shortage and related experiences ignited communities to take action to develop local wells and link with health facility staff for treatment and sensitization of the spread of water borne diseases in the community.

Case Study Summary

The researcher – a member of staff of the university, and keen to lay a good foundation for cooperation between future neighbours – asked a representative sample of stakeholders in the village to review the history of water supply in Bunumbu. As villagers told the sad story of the decline of the Degremont waterpipe scheme (which collapsed in the 1960s) and the subsequent lack of maintenance and replacement, culminating in an outbreak of cholera, people began to see the events in a new light. They realized that in failing to maintain the earlier pipe borne scheme they were reduced to relying on the chief's well (a spring under the hill behind Bunumbu). Because of widespread of gastro-intestinal infections from well water, they now recognized they needed to keep this source clean. The Paramount Chief was able to engage external help, and the researcher worked with staff of the local Peripheral Health Unit to focus more on outreach regarding water and health.

Detailed Explanation of engagement mechanisms

Context that provides the conditions in which the observed actions work

University researchers can act as enablers or facilitators for local learning by eliciting their remembrance of past experiences. In this case, the gathering of past history of water shortage and related experiences ignited communities to take action to develop local wells and link with health facility staff for treatment and sensitization of the spread of water borne diseases in the community.

Eastern Technical University Research Directorate has over the years encouraged staff to engage in research in communities where the university has campuses, including in Bunumbu. Bunumbu village houses the education faculty of Eastern Technical University. The college was destroyed in the war, after it was occupied by the Revolutionary United Front rebels, and only now is it being rebuilt. The new campus will have its own improved water supply but nothing is planned for the village.

The actions (mechanisms) that were observed to lead to resilience outcomes

Eastern Technical University has had two kinds of effect in Bunumbu.

First, the researcher (a university member of staff) examining the Degremont scheme collapse and subsequent water insecurity in the area triggered local people to reflect on what had led to their current situation.

They once had a piped water supply built with French aid in the 1960s. There was no provision for maintenance or training of technicians. The scheme eventually collapsed, and pipes and equipment were stolen. As villagers told the sad story of the decline of the Degremont scheme and the subsequent lack of maintenance and replacement, terminating in an outbreak of cholera, people began to see the events in a new light. Reflecting on these issues, people realized that due to a failure to maintain the earlier pipe borne scheme they had been reduced to relying on the chief's well (a spring under the hill behind Bunumbu).

Because of widespread gastro-intestinal infections from the well water, they now recognized they needed to keep this source clean. The Paramount Chief was able to engage external help, and the researcher worked with staff of the local Peripheral Health Unit to focus more on outreach regarding water and health. Villagers and their chief then began to organize to enact by-laws and user fees from fines to pay for water supply monitors. Another issue under discussion (as of March 2026) is publicly posting regular figures on monthly infections with gastro-intestinal disease. Posting figures on infection proved a powerful tool for motivating good local participation during the Ebola epidemic (2014-15), and the hope is that this can be extended to water supply protection.

Second, at an institutional level, ETU has, over the past ten years, extended its research, capacity building and direct community engagement to Bunumbu community research, to include reconstruction and research in the different fields to improve sustainable access to clean water.

The university proposed to put aside grants to researchers working for the university and students to carry out in-depth investigation on water access, testing, analysis and production in close collaboration with the people of Bunumbu community. This scheme also involves training of water engineers (comprising both regular students and local community).

ETU now acts as a critical enabler for Bunumbu community water security by conducting water quality assessments, drilling of boreholes on campus for the use of the institution and the community and technical local staff training in the Faculty of Engineering in Kenema City. The institution seeks to bridge the gap between national water management policy and community implementation, particularly in addressing rural needs where water scarcity affects community resilience.

Observed outcomes

The community mobilised to enact by-laws and impose fines which paid for water supply monitors to ensure local water sources remain clean.

The university continues to interact with Bunumu members and has provided water sources (bore holes) for the use of the students and the community. They have trained students in development and management of water technology, building local capacity.

Case Evidence

Vignette #2 in Sierra Leone – Water Insecurity –Supporting Evidence document

Related case studies

Sierra Leone – Water Insecurity – Social Learning

Other relevant case studies

Sierra Leone

Sierra Leone – Malaria-CHWs – Trusted leaders

Sierra Leone – Malaria-CHWs – Social Capital

Sierra Leone – Malaria-CHWs – Resource Mobilisation

Sierra Leone – Lassa – Trusted Leaders

Sierra Leone – Lassa – Knowledge Systems Alignment

Sierra Leone – Lassa – Communication & Information Systems

Sierra Leone – Lassa – Institutional Learning

Sierra Leone – Lassa – Social Learning

Sierra Leone – Traditional-Biomedicine tensions – Social learning

Sierra Leone – Traditional-Biomedicine tensions – Knowledge Systems Alignment