Mozambique Coastal Cities Adaptation Project (CCAP) - SIGIC

Overview

Chemonics' Mozambique Coastal Cities Adaptation Project (CCAP), funded by USAID, has led the development of a mobile system designed to aid in both disaster preparation and recovery. The system, called the Integrated System for Disaster Information Management (known by SIGIC, its Portuguese acronym), relies on a combination of simple, accessible SMS-based communication and a network of trusted volunteers with strong local community ties. Utilizing both of these resources in tandem, the project has been able to develop a model that has not only had significant impact on disaster resilience for the people of Mozambique, but is also scalable and replicable elsewhere.

The Challenge

For coastal countries that are vulnerable to natural disasters, early-warning systems and real-time reporting mechanisms are critical for saving lives and supporting humanitarian response. This is particularly true of Mozambique, which — with its weak infrastructure, fragile ecosystem, and high percentage of coastal residents — is ranked third among all African countries in terms of vulnerability to natural disasters. In addition to these challenges, disaster response efforts require significant coordination among local, municipal, national, and international actors in order to effectively reach affected populations. Furthermore, smartphone and Internet connectivity is inconsistent, making unified information outreach efforts difficult.

The Process

An initial concept for this type of system, Moz-Adapt, was developed by the World Bank with limited success. The CCAP team worked with the National Institute for Disaster Management (INGC in Portuguese) to build on this idea to create a system that would be more accessible to communities and individuals without strong technology skills. By coordinating with INGC, they were also able to ensure that the SIGIC system would fit into the agency's overall strategy and framework and had more opportunities to integrate the needs of local and municipal institutions.

The Solution

The system that was developed, SIGIC, has multiple components intended to reduce the damage done by disasters and coordinate and streamline recovery efforts. The system includes:

-   *Focal Point Training:* On a regular basis, CCAP and INGC train community volunteers on data collection and management, citizen outreach, and disaster preparedness.

- *Early Warning System:* When a potential disaster is identified, federal weather and disaster authorities disseminate warning information via SMS to focal points, who then share that information with their designated communities.
- *Post-Disaster Data Collection:* Within 72 hours of the disaster, focal points use basic SMS collection technology to send real-time data about community needs.
- *Data Analysis for Decision Making:* Local and federal disaster managers analyze the feedback in order to inform their response.
- *Follow-Up Data Collection:* Up to three weeks after the disaster, a more in-depth questionnaire is sent to focal points, who use it to gather more details about both the community's needs and the impact of the response thus far.

Sustainability

Both the model and the technology used by CCAP are easily sustained in Mozambique as well as replicable in other contexts. By using an off-the-shelf data collection tool with feature phone compatibility (DataWinners), the project has been able to create a relatively customized tool at a fairly low cost. Because none of the features used are unique to DataWinners, other agencies could conceivably utilize the mobile data collection and analysis tool that works best for them.

The other component of the system that contributes greatly to both sustainability and scalability is the use of community volunteers. Because the system relies on local volunteers who are also vulnerable to the impact of disasters, the "focal points" have a vested interest in continuing to participate; furthermore, their work is normalizing the idea of post-disaster data collection for future work, and the fact that the outreach is community-led means that the system is less likely to fall apart once the project is closed. Because the model relies on fairly simple, low-intensity training and does not require high levels of connectivity, it is also something that could be tried in other areas as well.

The Team

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