

Applying Information Technology to Reduce Disaster Risks Project in India

H Harnessing the Reach of Mobile Technology

With mobile phone technology now extending into many formerly isolated areas of the developing world, the potentially positive implications are beginning to be more fully realized. Flood-prone villages in the Indian state of Bihar, understand the potential applications of cell phones first-hand thanks to a unique pilot project launched by Catholic Relief Services in 2008. The project, *Application of Information Technology and Communication for Disaster Risk Reduction*, is providing mobile phones to community members

A villager trained to send SMS data sends updated information on the status of flood affected populations whom have sought refuge on an embankment in the state of Bihar in India.

• Photo by David Snyder for CRS



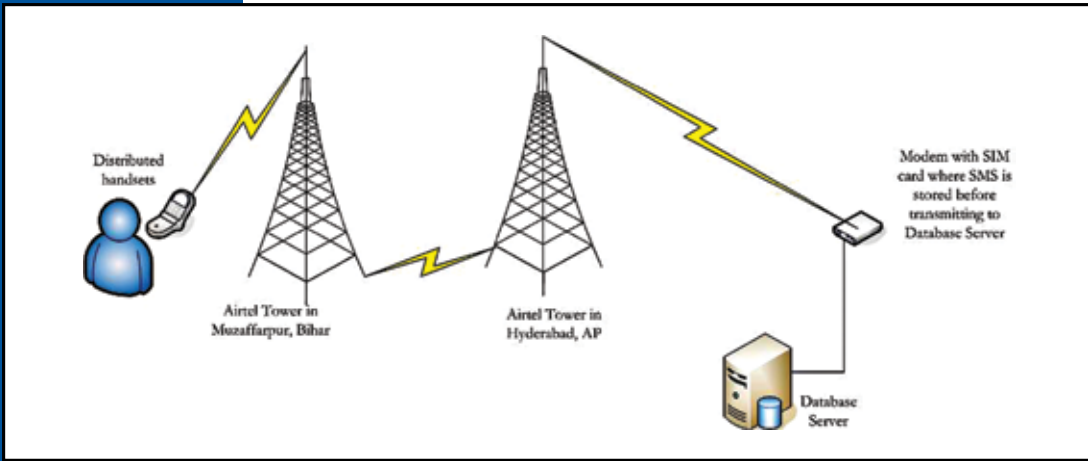
in disaster-prone areas and training to transmit emergency assessment data to a central database. This provides CRS with the opportunity to analyze

real time information to expedite planning an emergency response. These community members will serve as the first assessment team in the wake of rapid onset disasters such as floods, a common threat in Bihar. Training community members to carry out rapid emergency assessments and transmit the data using cell phones significantly reduces the response time, especially in hard-to-reach areas where there may be delays in the arrival of the first external assessment teams.

How it Works

In collaboration with the Massachusetts Institute of Technology (MIT), the CRS India Information Technology team designed assessment systems in five project villages, selected for their vulnerability to floods. A Village Information Communication Person (VICP) was identified through a process that involved the villagers themselves to fully engage the community and allow them to be directly involved in critical decisions that will impact their lives when disaster strikes.

The system CRS and MIT developed utilizes an emergency assessment questionnaire in the local language and simple text codes to answer assessment questions such as numbers affected by the disaster event - deaths, injuries, homes lost, current status of the event (level of flood waters, etc.), how people are coping, immediate needs, etc. Each VICP was trained to conduct the assessment and send the text coded data to advise CRS and partners of the damage and immediate needs following a disaster. Equipped with a real time



This diagram shows the route of transmission of emergency assessment data from the villager trained in the assessment system to the database server which CRS and partners access to analyze and plan an emergency response.

village-level assessment, CRS and its partners can determine how to meet the needs in any given emergency. A more in-depth assessment will follow once CRS' professionally trained assessment teams can reach the emergency site.

Secondary Benefits

While designed as a tool for emergency response, the cell phone technology and system is also being used to streamline existing government health reporting systems. Reporting via cell phone is now being done at the village level by government-trained health volunteers known as Accredited Social Health Activists (ASHAs). Data such as new births and maternal deaths can be delivered instantly through text messages, eliminating the slow and cumbersome hard copy system previously in place.

"It is very useful because we are able to send the reports at any moment in time from the village level itself," said Bindu Jyanmati, an ASHA volunteer in the state of Bihar and a participant in the CRS pilot cell phone project. "But if it was the regular system we had to go to the [local government] office so it takes time to travel, and then it takes money for transportation, and then we have to wait there for hours. And all of this is reduced with this system."

As with emergency work, CRS staff and partners are able to make rapid and effective health programming decisions based on information received from the village level by ASHAs like Jyanmati, saving considerable time, effort and money.

"This will improve the health capacity of the communities," Jyanmati said. "It used to take at least one month for any action to take place. Now it will be quick."

"It is very useful now to use because we are able to send the reports at any moment of time from the village level itself. But if it was the regular system we had to go to the block office so it takes time to travel, and then it takes money for transportation, and then we have to wait there for hours, sometimes three or four hours. And all of this is reduced with this system."

Bindu Jyanmati, female,
ASHA (Accredited Social Health Activist)