

Early Warning System Pilot People in Need



An innovative intervention providing Cambodian authorities with quick and targeted access to the population within their area of responsibility.

About People in Need

People in Need (PIN) is a Czech-based NGO with international programs in 23 countries. Registered in Cambodia since 2008, PIN focuses on four key sectors including emergency response and disaster risk reduction, maternal and child health, livelihoods and environment and urban poverty reduction.

The Problem

Cambodia is one of the most disaster-prone countries in Asia, with floods and drought the primary natural hazards to affect the country. These can cause significant loss of life and substantial damages to infrastructure, agriculture and livelihoods. With every new hazard, the existing vulnerability of Cambodia's mostly poor and rural population gets exacerbated. Despite its known risk level, Cambodia lacks a strong information dissemination system to support communities in times of disaster. According to a 2011 study conducted by the BBC World Service Trust on behalf of the Cambodian Ministry of Environment, many Cambodians either don't receive warning messages or are only informed after the disaster has struck.

The Challenge

In order to address this disaster information gap, PIN was looking to develop a system that would strengthen the capacity of the local authorities to let people under their responsibility know about upcoming disasters. The challenge was to find a way to disseminate information in near real time to large amounts of people for a minimum cost. With over 19 millions mobile phone subscribers in Cambodia, for a population of just under 15.5 million, a mobile system presented large advantages. Beyond coverage, mobile phones had the advantage over radio and TVs of being carryable, making them a particularly effective communication tool in times of emergency.

Technical Profile

- Design Elements**
 - Emergency alert
- Call Direction**
 - Outgoing calls
- Verboice Features**
 - Call flow designer
 - Play recorded audio
 - Menu option
 - Input option

PIN's key challenge when it came to using mobile technology was the low level of education and technical literacy which prevents many Cambodian from using their phone for more than making and receiving phone calls. With many phones still not supporting Khmer fonts, SMS also present a challenge for Cambodians that would otherwise have known to use the SMS function.

The Solution

To counter these technical and literacy challenges, PIN turned to the Verboice software. Verboice, which was developed by InSTEDD, is a tool that permits the easy dissemination of pre-recorded voice messages to pre-registered phone numbers. Using this tool, PIN was able to design an information dissemination system which provides local authorities with easy access to pre-

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The 2011 BBC trust report on public perception of climate change recommended the use of mobile phone for early warning message dissemination. Working with InSTEDD, we designed a small pilot to explore how this could be applied in the Cambodian context.

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registered citizens within their constituency. Requiring no programming skills, the software presents the advantage of being easy to use and requiring limited training. As an open source tool which can process hundreds of calls simultaneously, it is also quicker and more cost-effective than human-based information dissemination models.

For more on:

www.clovekvitsni.cz/en/humanitary-aid/country/cambodia

The Design

In times of disaster, clear, targeted and timely information is crucial. Working closely with the National and Provincial Committees for Disaster Management, PIN created a simple Early Warning System protocol: the Provincial Committee for Disaster Management staff will record short and simple messages; the provincial governor will approve the calls; and the committee staff will send out the calls to all registered citizens within the target village, commune, district or province. In order to maximise the reach of the message, the protocol also recommends for the messages to be kept short and to be sent to citizens only once.

The Results

PIN worked closely with the Pursat Provincial Committee for Disaster Management to test and fine tune this Early Warning System approach and protocol.

From August to December 2013, the team ran a pilot with over 300 citizens from 5 separate villages and 4 communes. As part of this pilot, PIN provided training to the Disaster Management Committee staff on Verboice use and content creation and ran a few trials. The results of the trials were largely positive. Over 90% of the participating citizens answered the calls and listened to the messages. All reported having understood the message's content and being willing to pay for such an early warning message in the future.

Next Steps

Building on the success of this pilot, PIN is working closely with the National Committee for Disaster Management to scale up the system and is initiating the rollout of the service to citizens from three Cambodian provinces.

In order to support the near universal registration of citizens within these provinces, the team launched a registration shortcode, which it is currently piloting. The registration shortcode can be dialled by anyone, providing citizens with the ability to self-register for the service.

Besides piloting this new registration approach, the team will continue training the local authorities to use the system as well as prepare for a potential countrywide scale up.



Verboice is a free and open-source platform that enables non-programmers to design and run a variety of interactive and automated voice-based applications (hotlines, alerts, reminders, quizzes, surveys, ...). Everything is done through a drag and drop interface which lets users combine Verboice's several features into a multitude of different applications.

Open source; easy to use; highly customizable and scalable

For more information, please visit www.verboice.com

