WARNINGS
BRIEFING NOTE

The First Mile of Warnings

Placing people first

Key Points

- People using warnings should be involved in the warning design and implementation from the beginning to build trust, credibility, and effectiveness.
- Providing technology to disseminate information is not the first warning step.
- Connecting local and external knowledge and experiences achieves the first mile.

State of the Art

Warnings can be timely, effective, and credible when they are a long-term process involving the people using the warnings from the beginning. This means that people using warnings contribute to the warning design and implementation, including anticipatory and responsive actions to help themselves and others. Understanding the meaning of warning messages and choices for action cannot start when a danger appears. Instead, it requires integrating the warning process into people's lives and livelihoods through working with them to understand their resources, abilities, needs, and limitations. Collaborating with people in this manner is the first mile of warnings.

Core Needs

The first mile of warnings means combining formal and informal communication and information exchange modes and methods, decision-making, and implementation. Examples are word-of-mouth distributing accurate information alongside messages from authorities that were developed with recipients and disseminated across all the technologies people own. Combining such communication approaches requires flexibility, transparency, and timeliness with feedback from and to everyone involved for continual adjustment. As society and technology change, the first mile supports adaptation to these changes to remain the first mile—notably so that everyone's contexts and needs are covered by the advised anticipatory action.

Guidance

The first mile means:

- People are and want to be involved in their own warnings and choices for actions. They are not passive recipients of messages and data to which they respond automatically.
- Integrating data collection and analysis of potential hazards and vulnerabilities into daily livelihood, cultural, and recreational activities produces a robust, continual, high resolution time series. It also trains people to develop and understand their own warning processes.
- Warning education, training, and drills become the norm, not a sudden, one-off exception.

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First Mile Warning for Manam Island, Papua New Guinea's Volcano [2]

Several thousand people live on Manam Island, just off the north shore of Papua New Guinea (PNG). The island is a volcano that erupted in 1937, 1957, 1992, 1996, and then multiple times in the twenty-first century. Evacuating to PNG's mainland and returning to Manam when the volcano quietens down has led to few direct volcano casualties so far. The first mile of warning supports these decisions and actions.

A traditional drum called a Garamut sends messages around the island, from one village to the next, including warnings. Messengers enjoy protected status among all the villages, so they can spread information rapidly even during times of conflict. Another warning-related cultural practice involves a friend (wantok) who exchanges information and supports needs during difficult times. Examples of meeting needs are providing food through fishing or gardens and supporting evacuees.

When a warning reaches a village, the chief discusses it with advisors and/or elders for making a consultative decision. This decision is then announced to the rest of the people whose culture generally trusts this approach for taking the chief's advice.

Not all warning information is mediated by leaders. Everyone is aware that they live next to an active volcano and they have developed local knowledge that might warn of a potential or impending eruption. Signs that the people suggest could be problematic, and that are part of the local oral tradition, include grass dying near the volcano's peak, especially hot weather during the dry season, blue smoke rings from the volcano, and a low tide witnessed continually.

Matching these signs with data from the nearby volcano observatory, particularly considering what is not directly visible such as deep earthquakes and small ground deformation, could build up a robust picture of the volcano's behaviour. Working with the people of Manam to share and interpret everyone's observations would contribute to a complete first mile warning system.

People of Manam (Photo by Jessica Mercer, 2006.)

References

[1] Kelman, I. and M.H. Glantz. 2014. Early Warning Systems Defined. Chapter 5, pp. 89-108 in Z. Zommers and A. Singh (eds.), Reducing Disaster: Early Warning Systems for Climate Change, Springer, London, U.K.

[2] Mercer, J. and I. Kelman. 2010. Living alongside a volcano in Baliau, Papua New Guinea. Disaster Prevention and Management, vol. 9, no. 4, pp. 412-422.

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