

# Using crisis mapping to aid Uttarakhand

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## Google Crisis Response page on Uttarakhand floods

Technology-driven efforts are on to crowdsource information using the Internet and other communication channels and integrate it into online maps to help manage the aftermath of the natural calamity that has beset Uttarakhand.

The international experience in recent years has proved that 'crisis mapping' can make a difference to disaster situations.

One such Uttarakhand flood relief effort, that aims to make use of 'digital volunteers' in India and other parts of the world to aggregate information from diverse sources and make it more useful and actionable has been launched by Hemant Purohit, a Crisis-Response Coordination researcher at the Ohio Center of Excellence in Knowledge-enabled Computing (Kno.e.sis), Wright State University.

And there exists an International Network of Crisis Mappers, which includes members with different skill sets, and experience in the use of tools covering crowdsourcing, mapping, use of aerial and satellite imagery, geospatial platforms, advanced visualisation and computational and statistical models.

What the volunteers are doing is to monitor different channels of information on Uttarakhand, including official sources, blogs, social media, non-governmental organisations, public networks and the news media to generate 'situation reports' and also update with vital information an online crisis map set up by the [Google Crisis Response team](http://google.org/crisismap/2013-utrakhand-floods? gl=in) (<http://google.org/crisismap/2013-utrakhand-floods? gl=in>). The map has information on rescued people, cleared areas, people stranded, relief camps, medical centres, road networks and so on.

Information flow will gather momentum as the repair and restoration of the mobile phone network progresses in Uttarakhand.

Google had also set up an instance of its webapp, Person Finder, that makes it possible for information about missing persons to be posted online and searched, with the option of triggering alerts.

The role of crisis mapping was to bridge the gap that existed between information-seekers and providers, particularly when it came to providing insights into the situation on the ground and the action that needed to be taken, Mr. Purohit said in an e-mail interview to *The Hindu*.

## Haiti earthquake

The world got a glimpse of the potential of crowdsourced mapping following the deployment of an open-source platform called Ushahidi when an earthquake hit Haiti in 2010. The information provided by the affected population and others over the Internet and the mobile phone network and the map-based capabilities of the platform helped in addressing specific disaster management requirements.

In the case of the Haiti earthquake, a volunteer team got the platform going fast and were soon tapping into social media sources like Twitter, facebook, and blogs and other media to create actionable reports. Later an international SMS number was created for people to input information relating to the quake. Soon it turned into a flood which was painstakingly processed by volunteers and turned into information that could be loaded onto an online map.

As many as 4,636 project volunteers translated 25,186 SMSs and numerous e-mails, web, and social media communications, resulting in 3,596 reports that were actionable and included enough relevant information to be

mapped on Ushahidi, said a United States Institute of Peace report.

Now the trend was to try to use automation to process such large volumes of information.

“Until recently, much of our crisis response and disaster coordination relied on manual effort using web infrastructure. Ushahidi is an excellent and successful example. More recently, there is rapid progress on our ability to use automation — especially in processing large amount of information shared on social media,” said Amit P. Sheth, director, Kno.e.sis Center. “We are at a stage where we should combine human effort with machine processing,” he said.