

Participatory Vulnerability Analysis

"If I had known that the river would flow this way this year, I would not have invested so much in my farm. I could have reduced my losses," rued Bikram, one of thousands of small farmers in Nepal who are regularly surprised by vagaries of nature. His preparations would have been much better had he had access to adequate geo-information, including river behaviour, nature and topography of upper basins, formation of silted islands, trend in river direction and water-tables around his land.

In this dynamic world, couldn't the power of geo-information technology be harnessed to assist people like Bikram and reduce his losses? Yes, geo-information technology can, as proved by a pilot initiative in 2008. The approach in which geo-information and GIS systems prove beneficial in risk reduction is called 'participatory vulnerability analysis' and uses people's perceptions of the neighbourhood and local knowledge, combined with geo-data such as satellite imagery and topographic maps, to produce multidimensional information sources for poor and marginalised people. The scope is enormous, potential applications vast and opportunities unlimited.

In 2008 a pilot initiative in Trijuga municipality in the Udayapur district of Nepal successfully combined people's perception, traditional knowledge and geo-informatics by superimposing local knowledge on topographic maps applying GIS technology. The result was splendid. Today, local administration and citizens are well informed concerning potential risks and existing vulnerability to disasters of various magnitudes and at different levels. Local plans integrate risk reduction components. People are aware of safe exits, most vulnerable zones and likely impacts. Informed people are better prepared to deal with pressure and emergency. Geo-information technology provides information which empowers people. The pilot proved that the power of GIS and geo-information can be easily combined in a participatory setting with traditional knowledge sources to create a win-win situation.

We need to localise technology, break down existing barriers, and simplify the entire concept so that geo-information technology offers tangible and lasting solutions to issues that affect the lives and livelihood of people, more specifically the poor and marginalised. The time has come to invest in and use (geo-)information technology for measures to eradicate tangible poverty. In this respect, (geo-)information technology is much more powerful than sophisticated data-management systems that improve governance. Geo-informatics has the potential to demonstrate that technology and traditional wisdom can become successful partners in offering tangible solutions to poverty through including the poor as participants in the process.