

## Natural disasters in Indonesia: Strengthening disaster preparedness

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The recent back-to-back disasters in Indonesia highlight the difficulties in ensuring effective early warning systems, and ultimately the lack of local capacity to respond to challenges when national assistance is stretched thinly across simultaneous disasters. With such frequency in disasters, it raises questions of the extent to which lessons from previous disasters were learnt and the progress of Indonesia's disaster preparedness.



Multiple earthquakes and a tsunami at the Mentawai Islands and volcanic eruptions at Mount Merapi occurred within 24 hours last week. Such disasters are not new and have occurred largely in the same areas. Sumatra has experienced several earthquakes recently including one in Padang last year and the one that caused the devastating [2004 tsunami](#) in Aceh, and Mount Merapi last erupted in 2006.

The 2010 Asia Pacific Disaster Report released last week says that people in the Asia Pacific region are four times more likely to be effected by natural catastrophes than those in Africa and 25 times more likely than those in North America or Europe. The UN report estimated that over 18 million people were affected by natural disasters in Indonesia from 1980 to 2009. The same report ranks Indonesia fourth highest amongst Asia Pacific countries that have been hit by natural disasters from 1980 to 2009. The 2009 Global Assessment Report on Disaster Risk Reduction also ranked

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Indonesia highly on its level of human exposure to disasters – ranking 3 out of 153 for earthquakes and 1 out of 265 for tsunamis.

It is apparent that despite the initiatives and measures taken to address vulnerabilities to natural disasters, local capacity and resilience are still lacking. Despite Indonesia's notable development of its disaster management initiatives since the 2004 tsunami, recent disasters showed that further improvements are needed. This is especially so in the areas of early warning systems, disaster-risk awareness and local disaster management capacities. The Indonesian Tsunami Early Warning System, implemented in 2005, is still in the early stages of development.

Specifically for the Mentawai Islands, there is a dearth of suitable infrastructure and funds to support efficient early warning system facilities. Onshore early warning system detectors have yet to be fixed due to unsuitable physical terrain. With no port and deep sea conditions surrounding the island, constructing detectors would be costly. The area has had to rely on off-shore floating detectors. These, however, have been experiencing technical problems for the past three years and often been prone to theft or vandalism. Even the nearest tsunami buoy is at Teluk Bayur 12 hours away by boat from the Mentawai Islands. More importantly, it appears that no steps had been taken to advise villagers to flee to the hills in the event of an earthquake, instead of waiting for a tsunami alert which never came. Also, the coastal communities live in areas where electricity, mobile phones and other telecommunication means are limited. Having vast coastlines also becomes a constraint for Indonesia to deploy sirens in vulnerable areas.

Additionally, it is difficult to coordinate evacuation in instances where early warning systems are working effectively. In one of the communities around Mount Merapi evacuation notices were given as early as Monday – just before the eruption – but there was a sense of inertia amongst locals to leave their houses. They were concerned about their properties and livestock that they would have to leave behind. This highlights the importance of heeding evacuation advice. There is a need to alter public awareness from perceiving natural disasters as unmitigated and unpredictable events to internalising disaster risk reduction (DRR) and responses as part of their lives.

In building local resilience to disasters, the role of local government is crucial. Indonesian law requires provincial and district administrations to be at the forefront of disaster management. While the National Agency for Disaster Management (BNPB) and military provide backup when requested. However, nationally-formulated policies have not created systemic changes at local levels. Regional agencies for disaster management have to be set up in all 32 provinces but they are only established in 18 provinces so far. In addition, there seems to be a strong sense of dependency on the national government to provide the necessary support, where the local government lacks capacity and resources.









Apparently many local governments are reluctant to use their budgets for disaster management. This may place a strain on resources at the national level, especially for responses when multiple disasters in different provinces occur simultaneously – as seen in 2009 and last week. Coordination also becomes harder

when the area is remote. For example, relief assistance to Mentawai itself takes half a day's boat ride from the port of Padang.

Local communities need to become less dependent on the national government for assistance. Local governments also need to allocate larger portion of their budget for disaster management. Building local capacity is vital and thereby ensures more effective responses to disasters. Indonesia's risk to multi-hazard disasters is increasing. Therefore, Indonesia must improve its capacity for recovery, rehabilitation and reconstruction from current disasters in order to mitigate future risks.

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