



# NDYS in Action, Newsletter

**Natural Disaster Youth Summit Monthly News**

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## The VOICE of YOUTH is NEEDED!

Editor: Daniel Paz,  
Salta, Argentina



Topics

**Climate Change and disaster reduction**  
Tsunami early warning system a work in progress.

## Tsunami early warning system a work in progress



Students watch films that explain the mechanics of earthquakes, tsunamis and other natural disasters at the National Exhibition of Disaster Preparedness in Padang,

Five years after the Indian Ocean tsunami, Indonesia's early warning system remains a work in progress, officials and experts say. Indonesia began setting up an early warning system in 2005, a year after a 9.2 Richter scale earthquake off Sumatra triggered a tsunami which left over 230,000 dead, 1.8 million displaced and 470,000 homes and buildings destroyed in 13 countries.

The Indonesian Tsunami Early Warning System has three levels: an earthquake monitoring system, a sea level monitoring system, and a computer modelling system able to generate different tsunami projections.

It collects data from seismometers, tide gauges, and GPS tracking units mounted on buoys to detect subtle changes in water pressure which could indicate an incoming tsunami, as well as ocean bottom satellite-linked sensors, allowing it theoretically to issue a tsunami warning at a regional level five minutes after an earthquake.

The warning would be relayed to the authorities, the media and communities likely to be affected. "Right now we have in place what we call Service Level 1 [the earthquake monitoring system]. We use earthquake monitoring equipment to determine earthquake parameters and the potential for tsunami generation," said Fauzi (like many Indonesians he goes by only one name), head of the Tsunami and Earthquake Centre in Jakarta.

Service Level 2 - the sea level monitoring system - is expected to be completed in April 2010, while Service Level 3 - tsunami modelling - should be in place by 2011, Fauzi said. Under the system, a tsunami warning will be issued for any undersea earthquake with a Richter scale magnitude of 7.0 or higher and a depth of less than 70km.

When earthquake data indicate a potential tsunami, computer predictions of the tsunami's height, volume and impact will be generated, as well as its estimated arrival time at different points along the coast.

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Fauzi said the sea level monitoring system was expected to be completed in 2010, along with the ability to produce predictive information about any tsunamis which might affect Java and Sumatra. He also said 50 tide gauges had been installed along the coasts of Java, Sumatra, Sulawesi and the Papua region and 20 more tsunami buoys would be installed across the country in 2010. "We have been facing a lot of problems operating the buoys. They often break down" said Fauzi.

However, Fauzi said he was optimistic the entire system, supported by countries such as Germany, China, France and the USA as well as UN agencies, would be ready by 2011.

Ardito Kodijat, programme officer for the UN Educational, Scientific and Cultural Organization (UNESCO)-sponsored Jakarta Tsunami Information Centre (JTIC), said regional capacity and instilling a culture of preparedness could prove greater challenges than putting in place the warning system. "The regions [provincial level and lower] remain a weak link in the overall early warning system," he said, adding: "There's so much to do in terms of education and safety facilities. It's not an easy task and takes a long time."

Kodijat said UNESCO was working with the Indonesian Institute of Sciences to educate people in disaster-prone regions about disaster preparedness.

Fauzi agreed with Kodijat that educating the public was the harder part: "Developing a culture of preparedness is a long process. It involves education from the elementary level on up."

Danny Hilman Natawidjaja, a geology researcher at the Indonesian Institute of Sciences, said relaying a tsunami warning to communities could also be a problem. "So far the dissemination of tsunami warnings has used telephone and SMS, and I don't know whether sirens are working," Natawidjaja said.

Sirens have been installed in coastal areas on Java, Sumatra and Bali and are tested every month, Fauzi said, adding that more sirens would be installed in Gorontalo, North Sulawesi and the Maluku islands next year. Natawidjaja and several other scientists who have studied Sumatra's geological fault line predict major earthquake in the West Sumatra area in the next three decades, generating a tsunami equal to that which devastated hit Aceh Province five years ago.

"I don't think any region is ready for a tsunami. If a tsunami happened now, the number of casualties would still be high," he said.

Source: [www.irinnews.org](http://www.irinnews.org)

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Evacuees are still in camps.

## Evacuees are still in camps

Nearly 50,000 people are still crammed in 29 evacuation centres in the eastern Philippine province of Albay after scientists raised the alert level of the Mayon volcano from three to four on a five-step alert system on 20 December.

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Evacuees spent Christmas in the centres - schools converted into temporary shelters - and will likely spend up to four months there should the volcano continue rumbling, according to provincial authorities. "I have already declared my province open season for all aid agencies," said Governor Joey Salceda.

"They don't have to go to my office any more to secure permission. We need all the help we can get at this hour of need."

Standby emergency funds from the local government may only last for four weeks, and resources were fast dwindling, he warned. "Our hope is



The 2,460m high Mayon is the most active of the Philippines 22 active volcanoes

that Mayon will not continue with this phase since the schools have to re-open after the Christmas break," he said. But the deep rumblings, ash fall and lava flows are indicative of a dangerous and imminent eruption.

To date, close to 10,000 families or 47,285 people from hundreds of villages in five townships inside an extended 8km danger zone have been evacuated since volcanic activity started on 14 December. Since the evacuation, however, many of the men were reportedly sneaking out of the camps in the daytime to check on their farms in the foothills of Mayon.

While they are "actively being discouraged" from doing so, Governor Salceda said it was almost impossible to monitor each and every person in the camps.

Meanwhile, experts have reiterated the need not to be complacent: Renato Solidum, head of the Philippine Institute of Volcanology and Seismology, said "a hazardous eruption remains likely within days."

The institute's observatory in Legaspi city near Mayon reported at least nine ash explosions accompanied by rumblings in the 24 hours up till 7am on 28 December. The explosions sent ash and lava fragments up to 2,000m into the air, covering villages and towns with a thin layer of fine particles that scientists warn could also cause respiratory and skin problems.

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Some 44 volcanic quakes were also recorded by seismic machines, it said. Tons of relief supplies have been trucked into the evacuation centres, and temporary tent clinics and hospitals have also been set up. Water and sanitation facilities, however, were in critically short supply.

The UN Children's Fund (UNICEF) said it had provided over US\$100,000 in supplies to address the urgent needs of children and their families, including water kits and medical supplies such as face masks. "Our hearts go out to the thousands of children and families who have been affected by the eruption," UNICEF country representative Vanessa Tobin said, but expressed relief that there had so far been no reports of any casualties. UNICEF said it was concerned for the more than 24,000 children whose schools have been converted into temporary shelters, and promised to bring in school tents and tuition packs to ensure classes can resume after the Christmas break.

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Candles night in Salta, Argentina.

## *Candles night in Salta, Argentina*

In many places of the world people participated in a parade holding up candles at night in order to take the attention and then let know their opinions and hopes.

In my city , Salta, in Argentina, we gathered in the central park and walked around it with some banners. Many students from the National University of Salta participated, also some professors and people in general.

At the end of the parade we all read a document which was sent for Avaaz organization who supported via online the event with ideas and digital material.

With the collaboration of all this people this could be possible, we had a great time and felt part of all of this.



In here we were starting the parade with the banners and candles.





**Comments:** Lets pray for our brothers in Albay who are having bad time and also a dangerous situation. Hope they can return home as soon as possible and continue their normal activities.

What happened in Salta city is something I have never seen. We felkt parto of all this situation and really wanted to Spreads our message. Maybe this gave some ideas to others.



*"Communication saves lives!"*

■ For more information please contact ■

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