

DOST's tsunami warning system makes coastal communities safer

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Wednesday, 28 November 2012 07:42

People living in high-risk coastal communities in Pangasinan and Albay are now better prepared for possible tsunami (events) with the recent installation of a tsunami detection system that provides real-time information and warning signals.

Called the Community Tsunami Detection and Warning System, the locally-developed equipment were installed recently in said provinces by experts from the Philippine Institute of Volcanology and Seismology (PHIVOLCS) and Advance Science and Technology Institute (ASTI), both of the Department of Science and Technology (DOST).

A Grant-in-Aid project of DOST titled "Establishment of a Cost-Effective Local Tsunami Early Warning System for Selected High-Risk Coastal Communities of the Philippines" or TeWS, the technology was put in place to provide a cost-efficient yet reliable system device for tsunami forecast and allow timely disaster response.

PHIVOLCS and ASTI undertook the first installation off Bolinao, Pangasinan in the Lingayen Gulf last September—the first complete set of tsunami ultrasonic sensors to be put in place. Later, tsunami warning sirens were installed in the following pilot barangays: Barangay Poblacion in Bolinao, Poblacion in Lingayen, and Gueset, Pugaro, and Binloc in Dagupan City.

Meanwhile, in Albay Gulf, the Community Tsunami Detection System and a warning siren was installed in the municipality of Rapu Rapu, while four other warning systems were put in place in the capital city of Legazpi.

The technology is basically made up of a platform with a 15-meter high pole. Two types of sensors are attached to this pole: the ASTI-designed ultrasonic tide gage sensor which notes the rise and fall of the sea level, and the PHIVOLCS-designed wet and dry sensors. The wet sensor detects post-earthquake receding water which may signal an impending tsunami, while the latter determines if water had already hit the pole. The wet sensor is installed at 1-, 5-, and 10-meter heights above sea level.

Information generated by the system reaches the LGU in near real-time. In cases when an earthquake is strong enough to cause a tsunami, the LGU can sound off the warning siren to warn those living in coastal areas and give them enough time to prepare and flee their homes, thus allowing the Philippines to climb several notches higher in the area of disaster preparedness and management.

Presently ongoing is the construction of two warning sirens in Subic, two in Olongapo, and one in Subic Bay Metropolitan Authority (SBMA). (Angelica A. de Leon, S&T Media Service)