

The Tsunami warning system in French Polynesia in 2015

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The tsunami warning system of French Polynesia has been created in the sixties under the impulsion of the CEA/Laboratoire de Géophysique, and of the French Government that manages and controls all the organizational part of the warning to the population.

The tsunami warning is actually initiated via an automatic detector of strong earthquake that sends an alarm and calls the agent on duty; the seismic warning threshold is fixed at a magnitude of $M_w = 7.3$.

The current tsunami warning system is first based on a complete evaluation of the earthquake's characteristics (location, energy, and focal geometry) in about 30 to 45 minutes after the earthquake; then, using a dedicated supercomputer the preliminary tsunami forecast is sent to the Civil Defense, which disposes in less than one hour after the earthquake, of the distribution of tsunami heights expected for the different archipelagos of French Polynesia.

Notice that the tsunami warning to the populations is decided in function of the expected tsunami height (not in function of the magnitude).

The Civil Defense will then diffuse the tsunami warning to the populations via the media (radio, TV), and the telemetered siren network (144 sirens in use presently).

The last effective warning of Chile April 1, 2014 will be described as an example