

3.1-P30. The Japan Trench Earthquake and Tsunami Monitoring Network Project of Cable-linked 150 Seafloor Observatories (The S-net Project)

The S-net Project is currently in progress in Japan to construct a large-scale seafloor monitoring network of earthquakes and tsunamis along the Japan Trench. NIED takes in charge of the project which is supported by MEXT financially. A disaster prevention is a major purpose of the network by providing earthquake and tsunami data on the seafloor in real-time. Such real-time data make it possible to forecast the next-generation early tsunami warning which could precisely predict a coastal tsunami height. Also the real-time earthquake data on the seafloor make it possible to forecast an earthquake warning much earlier than the present system. The seafloor observatories of 150 sites are connected by an optical cable of 5,800 km in a total length. Each observatory is equipped with seismometers of several types and two hydro-pressure gauges of the same type. The seismometers cover a dynamic range of 4G in acceleration and a frequency range of 0.05 Hz to 30 Hz. The hydro-pressure gauges which are used as a tsunami meter have a resolution of a few millimeters in a water column height change. The completion of the S-net project is in FY 2015.

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