Offshore real-time monitoring system and its application to disaster resilience

*Yoshiyuki Kaneda[1,2,3], Narumi Takahashi[3,2], Hiroyuki Matsumoto[2]

1. Kagawa University, 2. Japan Agency for Marine-Earth Science and Technology (JAMSTEC), 3. National Research Institute for Earth Science and Disaster Resilience (NIED)

In Japan, some types of offshore real-time monitoring system have been deployed off the coast of the Pacific Ocean including the Nankai Trough seismogenic zone and the Tohoku seismogenic zone (i.e., the Japan Trench). DONET and S-net have been deployed in the Nankai Trough and the Japan Trench, respectively, since the 2010s. Now, new development of next generation real-time monitoring system namely N-net has been launched, which is focusing on the western part of the Nankai Trough.
Many catastrophic earthquakes, volcanic eruptions and tsunamis bring destructive disasters in the world. In Indonesia, for example, the Palu earthquake and the Anak Krakatau volcanic eruption/collapse brought tsunami disasters in 2018. Therefore, we should realize that offshore real-time monitoring systems are very important and effective for early warning.
The Japanese offshore real-time monitoring system such as DONET and S-net are used for earthquake early warning (EEW) and tsunami warning, and they have contributed to understanding of seismic activities in the region. At the same time, we could examine the *in-situ* data acquired by the system for the purpose of scientific studies.
In the presentation, we introduce the Japanese offshore real-time monitoring system and the utilization of their data.

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