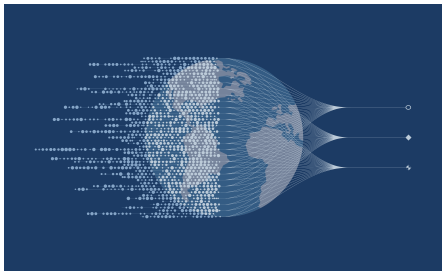

ID: **P5.1-551** Type: **E-poster**

# Necessity of Infrasound Stations for Comprehensive Monitoring in Indonesia

This study assesses the need for an infrasound station facility in Indonesia, with Ujung Kulon, West Java as one of the potential sites. Indonesia relies on infrasound data from nearby countries limiting independent monitoring of detail events. Data from IMS stations like I06AU, I39PW and others provide insights, however are insufficient for comprehensive monitoring.

The installation of an infrasound station at Ujung Kulon will enhance the national Early Warning System (EWS) in Indonesia, complementing the seismic network and improving disaster forecasting and climate monitoring. A temporary infrasound station was installed by BMKG in Palangkaraya, Kalimantan in 2004 with support from DASE/CEA, but it is no longer operational, highlighting the need for permanent infrastructure.

This study proposed a distributed infrasound array model for the initial station installation, which would eventually expand to strategically selected places throughout Indonesia. This array design optimizes data collecting by assuring wider coverage, increasing signal detection sensitivity and minimizing noise interference from ambient factors.

Infrasound technology is useful for detecting low-frequency acoustic waves from volcanic eruptions, tsunamis and atmospheric disturbances, often overlooked by seismic systems. Establishing in-country infrasound stations will strengthen Indonesia's monitoring capacity, enhance disaster preparedness and contribute to global networks.

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**Session Classification:** P5.1 Synergies with Global Challenges

**Track Classification:** Theme 5. CTBT Science and Technology in the Global Context: T5.1 Synergies with Global Challenges