International Monitoring System Sustainment into the future

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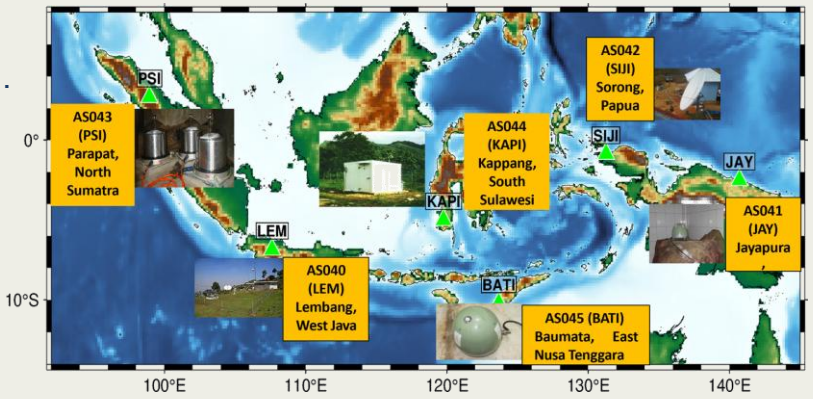
SCOPE OF THE NDC

Waveform Monitoring

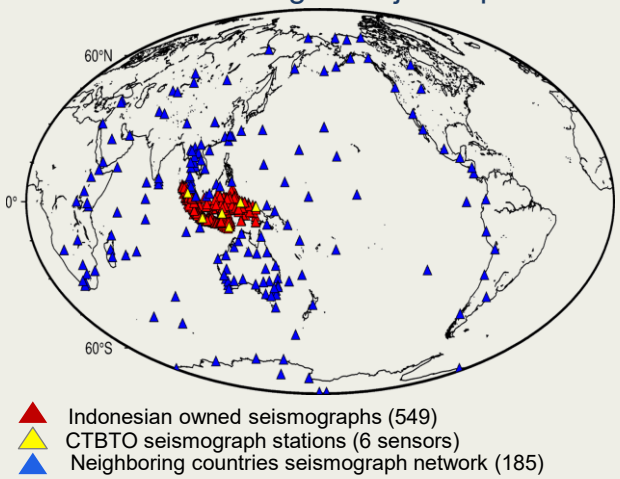
BMKG as NDC accesses data from the 6 Auxiliary Seismic Station (AS040-AS045: LEM, JAY, SIJI, PSI, BATI, KAPI)

The NDC also manages national Seismic network and processes waveform data for both treaty related and disaster warning purposes



Integration with National Data

- NDC are integrated with national earthquake and tsunami monitoring system
- Real-time waveform data is shared through IRIS/EIDA
- Collaboration with national agencies under MOU enhances data exchange and joint operations



INFRASTRUCTURE INFORMATION : GLOBAL COMMUNICATION INFRASTRUCTURE

Name of Establishment to host GCI Interface: Center for Communication Network of Meteorology, Climatology, and Geophysics Agency

Method of connection: Using a Very Small Aperture Terminal (VSAT) connection via the CTBTO GCI to receive real-time IMS data and IDC products at the rate of 150 Mbytes/day.

CHALLENGES AND LESSON LEARNED

Common Challenges

- Tsunami modeling and sensors focus only on seismic/tectonic events.
- Limited expertise in non-seismic IMS technologies.
- Communication bandwidth via VSAT limited (150 Mbytes/day), hindering real-time data transmission.

Lesson learned

- Integrating multiple monitoring technologies improves detection.
- CTBTO training enhances national technical capacity.
- Software development increases earthquake detection accuracy.
- Multilateral cooperation strengthens trust and preparedness.

FUTURE SUSTAINMENT

- Expand expert exchange and capacity building.
- Improve durability and quality of monitoring stations for longer operation.
- Integrate multi-sensor technologies for better detection.
- Strengthen international cooperation for real-time data sharing.
- Upgrade communication infrastructure for higher bandwidth
- Develop automated, reliable monitoring systems for sustainability.

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