Australian Government
Geoscience Australia

Australian Aid

BNPB
BADAN NASIONAL PENANGGULANGAN BENCANA

IMPROVING DISASTER MANAGEMENT IN INDONESIA

Highlights from the 10-year disaster management partnership

Indonesia is one of the most disaster prone countries in the world. For 10 years the Australian and Indonesian governments, science agencies and universities, have partnered to strengthen disaster management in Indonesia. Working together on policy informed by science and technology, has greatly improved decision making around disaster management in Indonesia. By helping people prepare for, respond to, and recover from disasters, more lives can be saved, impacts on the most vulnerable members of society reduced, and infrastructure can be protected.

Our partnership has concentrated on strengthening the evidence base for informed disaster management by improving:

- **hazard information** for earthquake, tsunami, volcano and flood
- **spatial data** for exposure (population, building, roads and infrastructure)
- **decision support tool** (InaSAFE) to inform disaster response and management decisions.

The Indonesian government is better placed than ever before to manage disasters.

KEY ACHIEVEMENTS

PLANNING AND RESPONDING TO DISASTERS

Indonesian disaster management agencies can now plan for and respond to disasters more effectively with improved tools, data and capacity.

- The Indonesian Disaster Management Agency (BNPB) is now actively using InaSAFE to develop contingency plans.
- Indonesian science agencies have strengthened capacity to develop evidence-based hazard information to underpin disaster management decisions. Examples include:
  - Tsunami inundation maps developed by the Geological Agency of Indonesia (BG) are now underpinning evacuation route planning and informing the design and location of critical infrastructure.
  - The Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG) can now provide more accurate tsunami warnings and real-time earthquake impact information resulting in safer communities.
  - Future updates of the Indonesian building code will reflect the new Indonesian earthquake hazard map ensuring buildings can better withstand earthquakes.
- Volcanic ash fall models developed by BG are being used to plan and respond to a volcanic eruption as well as informing the location of critical infrastructure. This capability has been successfully demonstrated during a number of eruptions over the last 10 years.
- BNPB has an effective partnership with the Humanitarian OpenStreetMap (OSM) Team to develop data that describes buildings and roads that could be impacted by a disaster.

TEN YEARS

Over 12.6 million buildings have been mapped

TEN YEARS

Over 400 thousand km roads have been mapped

Data and tools developed through the Indonesia – Australia partnership are now being used internationally by organisations such as United Nations Office for the Coordination of Humanitarian Affairs and the World Food Program. Other donors are now investing in replicating aspects of this program in other major Indonesian cities.

EDUCATION, TRAINING AND GOVERNANCE

- The Institute of Technology Bandung (ITB) have now established the Graduate Research School for Earthquake and Active Tectonics (GREAT) program to train the next generation of scientists that work in the earthquake hazard field. Four PhD and 30 Master students have already graduated from this program.
- Indonesian government science agencies have enhanced earthquake, tsunami and volcano hazard modelling capabilities to assess the impact of potential events. This allows better preparation and mitigation activities to improve the resilience of the community to disasters.
- Current and future disaster managers are being trained in the use of online tools, InaSAFE and OpenStreetMap (OSM) which are used to interpret critical data to plan for disasters. Training for these tools is now included in the curricula of leading Indonesian universities.
- Online guides have now been developed, empowering the Indonesian community to collect data so disaster management agencies can provide better support.
- National Earthquake Hazard maps in Indonesia are now developed by a collaborative governance structure which allows agencies to understand the likelihood and intensity of a hazard event.

STRENGTHENING AUSTRALIA'S RELATIONSHIP WITH INDONESIA

The 10-year partnership has firmly established strong links between Australian and Indonesian scientists that will continue to foster collaborations.

- Australia has benefited from collaborative efforts to better understand the source of earthquakes and tsunamis in our region. This data is included in the Australian Tsunami Hazard map and Earthquake Hazard map.
- The airline industry is benefiting from enhanced collaboration between Australian and Indonesian agencies in assessing volcanic ash hazard, providing the most safe and efficient service to airline passengers and their staff.
- The Australian National University has signed a joint Master's degree program with Institute of Technology Bandung (ITB) reflecting the effective partnership fostered through this program, and allowing research scientists to have a broader understanding of our regions complex tectonic environment.

For Further Information:

Geoscience Australia
Website: www.ga.gov.au
Email: clientservices@ga.gov.au
Ph: +61 2 6249 9111

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