



SUPPORT OF BMKG IN DEVELOPMENT OF TSUNAMI HAZARD MAP AND SEKOLAH LAPANG GEMPA

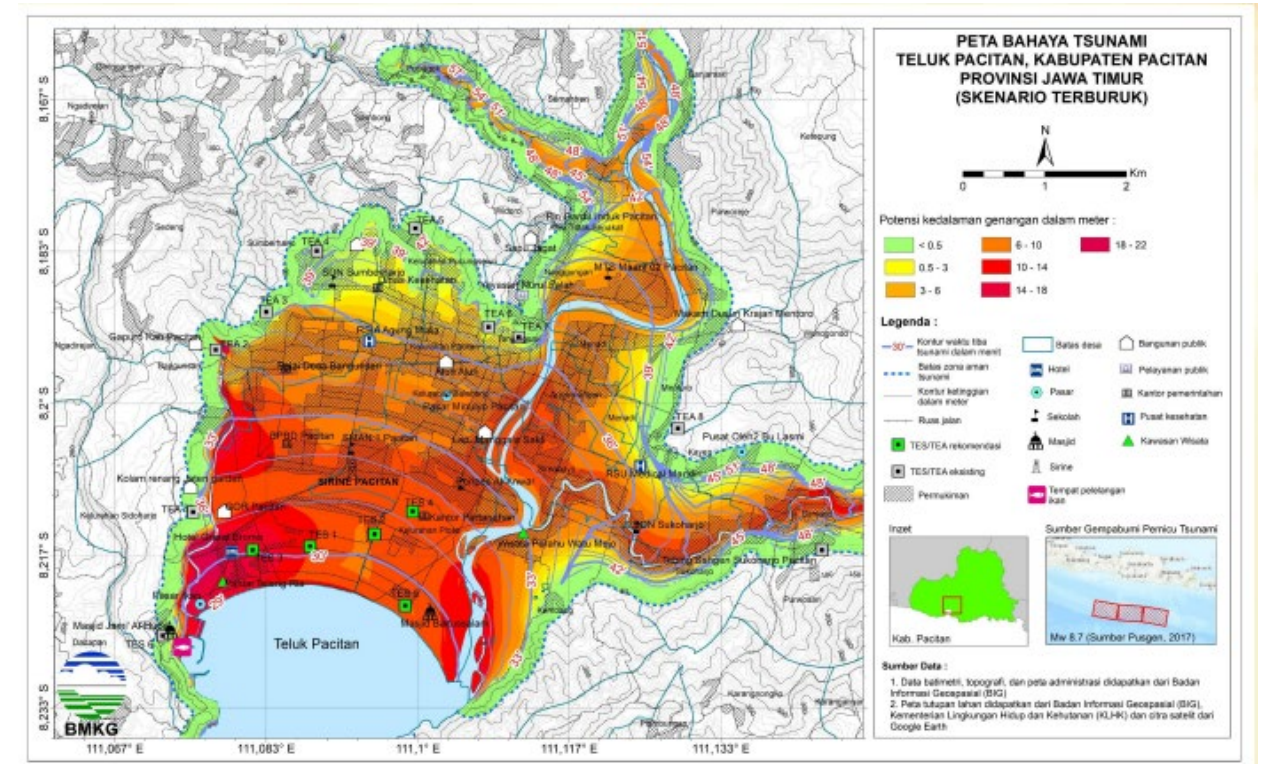
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BMKG's Coordinator for Tsunami Ready

Indian Ocean Tsunami Ready Workshop
Tanjung Bena, Bali - Indonesia
22-26 November 2022



THE TSUNAMI HAZARD MAP

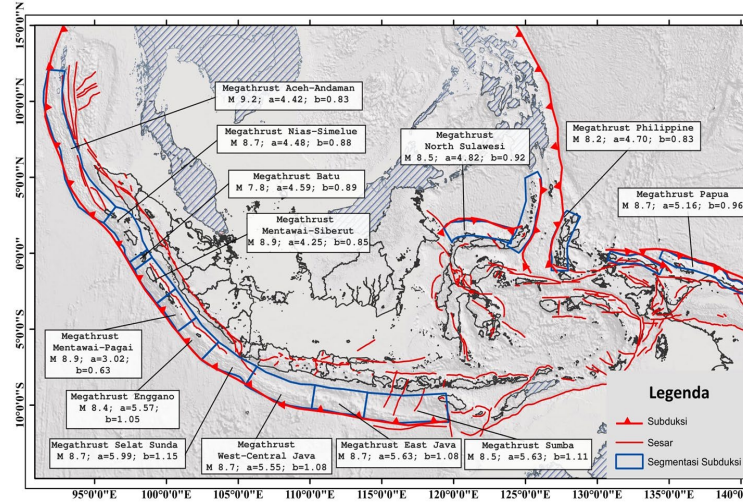
- The primary source for mapping potential tsunami hazard zones is inundation modeling, which illustrates expected areas to be flooded by the tsunami.
- The community could request external experts (disaster management offices, universities, academicians, researchers and consultants) to assist in establishing the tsunami hazard zone based on inundation modelling.
- The tsunami hazard zones depict the areas that are prone to tsunami. Tsunami hazard zone maps are used as a base for tsunami evacuation mapping and planning



Tsunami Hazard Map

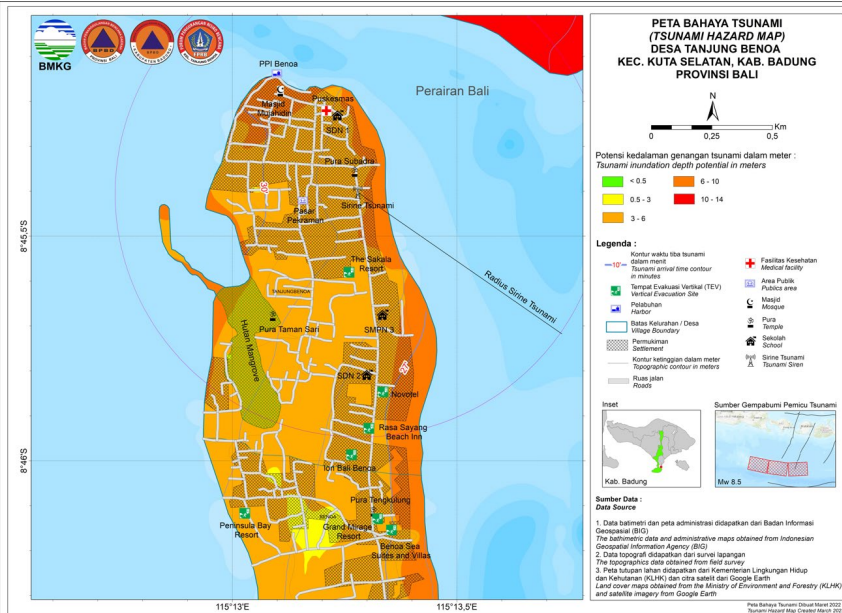
DEVELOPING THE TSUNAMI HAZARD MAP

- The tsunami hazard map was based on the inundation modelling of worse earthquake scenario
- The Earthquake scenario was provided by PUSGEN
- BMKG developed more than 85 maps of 15 provinces
- The map shows the hazard zone, safe zone, and the land mark point of interesting, and interesting location



Earthquake Scenarios, PUSGEN 2017

No	Province	Number of Maps
1	Aceh	5
2	Sumut	5
3	Sumbar	8
4	Bengkulu	4
5	Lampung	8
6	Banten	13
7	Jabar	5
8	Jateng	4
9	Yogya	3
10	Jatim	10
11	Bali	6
12	NTB	1
13	Maluku	6
14	Maluku Utara	1
15	Papua	6



Tsunami Hazard Map Books

Tanjung Benoa Tsunami Hazard Map

Number of Tsunami Hazard maps had been developed

INVOLVING LOCAL COMMUNITIES AND GOVERNMENT TO VERIFY THE TSUNAMI HAZARD MAP



The Head of BMKG Verified the tsunami hazard map with The local government



Involving the communities to verify the tsunami hazard map

- The local government and communities were invited to verify the tsunami hazard map
- Assessing the evacuation facilities
- Giving a recommendation to the local government for tsunami evacuation plan based on the tsunami hazard map

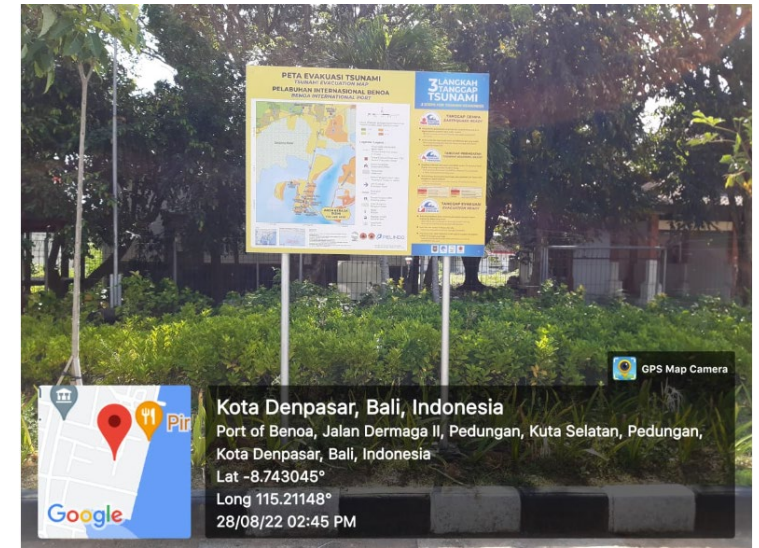
DISPLAYING THE TSUNAMI HAZARD MAP



Tsunami Hazard/Evacuation Map in Kuta Mandalika



Tsunami Hazard/Evacuation Map Tanjung Benoa



Tsunami Hazard/Evacuation Map Tanjung Benoa Port

- The Map was deployed at a crowd center of community area
- The Map was developed further as a tsunami evacuation map
- The Map is design as a Tsunami Public information board



Tsunami Hazard/Evacuation Map Pangandaran

THE COMMUNITY EDUCATION ACTIVITIES OF SEKOLAH LAPANG GEMPA (SLG) ON CONTRIBUTING TO THE DEVELOPMENT OF TSUNAMI READY COMMUNITY

- The SLG (Earthquake Field School) is a capacity building activity to enhance local government and community awareness and response
- LDMO, Community, Army, stakeholders related to the disaster management and response, School, community, private sector are involved.
- The scope of the SLG:
 1. Field Survey and advocating the implementation of the 12 indicators
 2. TOT Workshop of the SLG
 3. School Exercise
- 114 tsunami prone areas had been trained by conducting the SLG.
- 7 Communities are advocated to get IOC-UNESCO tsunami ready recognition

BMKG

"SEKOLAH LAPANG GEMPABUMI"

PUSAT GEMPABUMI DAN TSUNAMI KEDEPUTIAN BIDANG GEOFISIKA
 Jl. Angkasa 1 No. 2, Kemayoran, Jakarta 10720
 Telp. (021) 424 6321 | Fax. (021) 424 6703

Salah satu tugas **BMKG** adalah menyediakan dan menyebarluaskan informasi gempabumi dan tsunami, memastikan informasi dapat diterima dan dipahami pihak terkait utamanya Badan Penanggulangan Bencana Daerah (BPBD).

Pemahaman yang benar mengenai informasi gempabumi dan tsunami menjadikan BPBD dapat memberikan arahan yang tepat kepada masyarakat.

METODE

1. **Paparan** tentang potensi gempabumi dan tsunami serta kesiapsiagaan menghadapinya
2. **Diskusi kelompok** mengidentifikasi peran masing-masing kelompok
3. **Table Top Exercise (TTX)** simulasi dengan skenario gempabumi dan tsunami

TUJUAN & SASARAN

Tujuan :
Menguatkan peran BPBD dan pemangku kepentingan di daerah sebagai simpul komunikasi agar dapat memahami informasi gempabumi dan peringatan dini tsunami

Sasaran :
BPBD, Masyarakat, Sekolah, Aparat dan Media di wilayah rawan gempabumi dan tsunami.

MANFAAT

- BPBD dan pemangku kepentingan memahami informasi gempabumi dan peringatan dini tsunami dari BMKG
- Masyarakat siaga dan tanggap terhadap ancaman gempabumi dan tsunami di wilayahnya
- Media dapat berperan dalam rantai peringatan dini tsunami

PELAKSANAAN SLG

2015	▶ 10 Kota / Kabupaten
2016	▶ 23 Kota / Kabupaten
2017	▶ 1 Kota
2018	▶ 2 Kota
2019	▶ 30 Kota / Kabupaten
2020	▶ 1 Kota / Kabupaten
2021	▶ 30 Kota / Kabupaten
2022	▶ 18 Kota / Kabupaten

114 LOKASI

Infographic by trilbowo

InfoBMKG | www.bmkg.go.id | Inatews.bmkg.go.id | mitgasibmkg

FIELD SURVEI AND ADVOCATION OF THE 12 INDICATORS

- Field survei was addressed to evaluate the 12 indicators
- Advocating the community to review the 12 indicators
- Some of the community had been assisted by other collaborators.



Advocacy of the compliance of the 12 indicators in Tambakrejo village



Discussion on the development of Emergency Plan

ACADEMIC SESSION OF THE TSUNAMI AWARENESS AND PREPAREDNESS

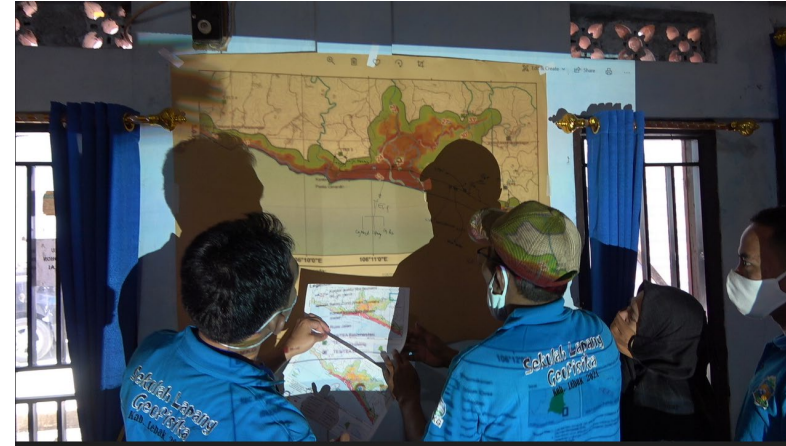
- The SLG provides an academic session giving a knowledge of:
 - a) Tsunami potential
 - b) Safe steps to response the natural warning
 - c) The Earthquake information and tsunami warning
 - d) The Tsunami Ready Community Concept



INTRODUCING THE TSUNAMI HAZARD MAP



Introduced the tsunami hazard map and verified with the real condition



Discussed the tsunami hazard map to develop the evacuation map

- The participants were brought to the field to get an understanding of the hazard zone based on the tsunami hazard map
- The participants discussed the tsunami evacuation map based on their Tsunami Hazard Map

DEVELOPING A PREPAREDNESS AND RESPONSE TEAM AND SOP



Community presented the structure organization of the preparedness and response team



Discussing the SOP

Communities were trained to established:

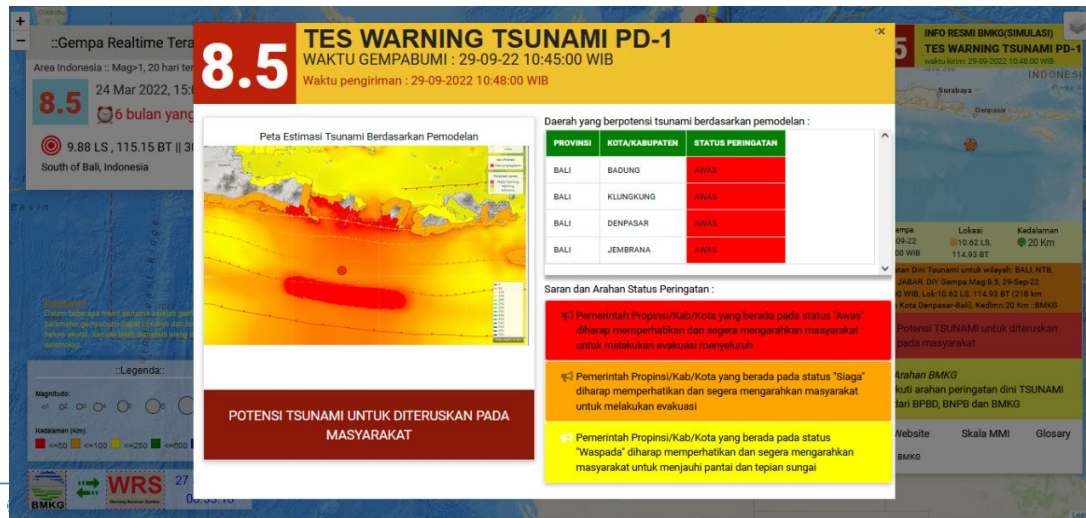
- the Preparedness and Response Team
- The Tsunami Response and Evacuation Procedures

TABLE TOP EXERCISE (TTX)

- A table top exercise was conducted to examine their SOP
- The Scenario was made based on the worse scenario
- The participants have to response all the scenarios based on their roles on the preparedness and response
- The TTX examined the response of the LDMO and Community on the tsunami warning



Participants discuss to response the scenarios of the TTX



Participant's respon to the scenario

BMKG'S GOES TO SCHOOL

BMKG conducts an education activity for school:

- The natural warning
- How to response a big or long duration shaking
- How to prepare the Tsunami Ready School
- Tsunami Simulation





7 Komunitas Siaga Tsunami di Indonesia

1 Diantaranya Telah Diakui Sebagai Komunitas Siaga Tsunami oleh UNESCO - IOC



1. Kel. Tanjung Benoa - Badung
2. Kel. Glagah - Kulonprogo
3. Desa Kedadang - Gunung Kidul
4. Desa Pangandaran - Pangandaran
5. Desa Panggarangan - Lebak
6. Desa Tambakrejo - Malang
7. Kel. Kuta Mandalika - Lombok Tengah



Kelurahan
Tanjung Benoa



unesco
Intergovernmental
Oceanographic
Commission

UNU for Sustainable Development

Indic Ocean
Tsunami's Correction
Centre

UNU for Sustainable Development

TSUNAMI READY VERIFICATION



TSUNAMI FUN DRILL

In the Commemoration of WTAD, 5 November 2022, the 9 Villages were conducting the TSUNAMI FUN DRILL to campaign #gettohighground

More than 3500 participants engages including person with disabilities



**WORLD
TSUNAMI
AWARENESS
5 NOVEMBER DAY**



📍 PURUS VILLAGE



Number of Participants Reached 300 people consisting of: 250 Community Members, 50 Stakeholders. Elements Involved: Mayor, Regional Secretary, BPBD, Firefighters, Police and Army, Hotel, University and Primary School

📍 LOLONG BELANTI VILLAGE



Number of Participants Reached 1035 people consisting of: Students and Teachers Primary School and Junior High School, Regional Disaster Management Agency, Police and Army, Disaster preparedness Group, Person with disabilities. Attended by the Mayor of Padang, the Secretary of the City of Padang.

📍 TAMBAKREJO VILLAGE



Number of Participants Reached 130 people consisting of: Regional Disaster Management Agency, Village Government, Traders and Fishermen.

📍 KUTA MANDALIKA VILLAGE



Number of Participants Reached 166 people consisting of: Kuta Village Community, Indonesia Tourism Development Corporation (ITDC), Regional Disaster Management Agency in Central Lombok, Primary School, Novotel Lombok Resort & Villas, Pullman Lombok Merujanu Mandalika Beach Resort, Secretary of Kuta Village, Police and Army.

📍 YOGYAKARTA INTERNATIONAL AIRPORT



Yogyakarta International Airport was involved in Earthquake and Tsunami Simulation Activities to serve as an evacuation site for Glagah Village residents.

📍 MINANGKABAU INTERNATIONAL AIRPORT



Minangkabau International Airport carried out an earthquake and tsunami simulation with a total of 1000 participants

📍 PANGGARANGAN VILLAGE



Number of Participants Reached 200 people consisting of: Community Movement and Village Disaster Preparedness, Japan International Cooperation Agency (JICA), Panggarangan Village Official, Volunteers for the South Labak Mitigation Group (GMLS), students and Teachers at primary school, Special Needs School, Police and Army, Indonesian Red Cross (PMI)

📍 PANGANDARAN VILLAGE



Number of Participants Reached 161 people including: Regional Disaster Management Agency, Neighborhood Association, Community early preparedness forum of Pangandaran Village, Primary School, Police and Army, Search and Rescue team, Traders, Department of Transportation.

📍 GLAGAH VILLAGE



Participants reached 300 people consisting of: Residents, Glagah Indah Beach tourists, Schools, Yogyakarta International Airport, Regional Disaster Management Agency, BMKG Glagah beach tourists and fishermen, Police and Army.

📍 KEMADANG VILLAGE



The number of participants reached 150 people consisting of: Baron Beach traders, Kemadang Village officials, Police and Army, BMKG, Regional Disaster Management Agency, Disaster Risk Reduction Forum of Kemadang, Quick Reaction Team of Gunungkidul.



THANK YOU

