



Statistics Indonesia

Adaptive Tools to Evaluate the Interventions' Program on Climate Change and Disaster: Index of Disaster Preparedness Measurement

GLOBAL CONFERENCE ON

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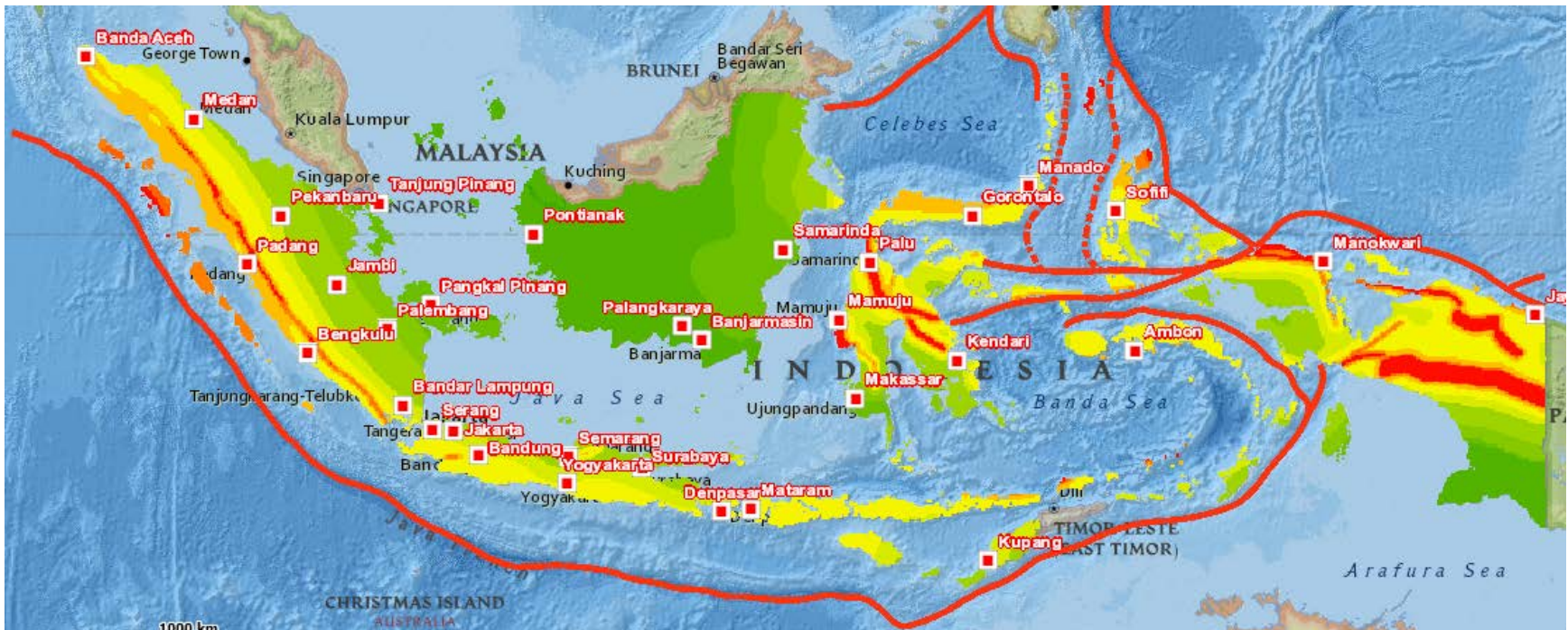
Background

- The urgency of creating measurement related to evaluation-monitoring program development, particularly adaptation to vulnerable people links to climate change effect of which resulted by disaster in the peak disastrous region of Indonesia
- The 13th Goals of SDGs been declared by UNs High Meeting in New York on 25-27 September 2015

Background

5 Million Indonesian People in TSUNAMI threat

- 127 Regency/ city on the **Top High Risk of Disaster** , tsunami > 5 meter; 3,2 million people
- 46 Regency/ city on the **High Risk of Disaster** , tsunami 3-5 meter; 758 thousand people
- 26 Regency/ city on the **Moderate Risk of Disaster** , tsunami 1-3 meter; 109 thousand people



Why Padang City

- The coastal area and has experienced several catastrophic earthquakes and tsunami
- High risk and high occurrence of disaster
- The catastrophes : floods, floods and landslide, landslides, earthquakes, tornados, land and forest fire, droughts, tidal waves/abrasion, and transportation accidents.
- 2013 was trying to portray on knowledge level, mindset and behavior of the people towards disaster where the type of disaster mostly as an effect of climate change, thus it is very urgent to do monitoring-evaluation.

Lessen Learnt of Earthquake 11 April 2012 in Padang City



Traffic Jammed was happened every where On the by Pass of Simpang Alai Road



Pasien yang dibawa keluar
Dari Rumah Sakit

Why Index Preparedness

- A popular methodology for evaluating relative levels of some state of being, whether economic health, quality of life,
- To capture levels of social vulnerability to natural hazards
- Becomposed of several different indicators that relate to the quality of life, human development, vulnerability, emergency preparedness, tend to be socially constructed and are used in indices that measure conditions and changes over time, for different populations (Land, 1983).

Why Index Preparedness

- Facilitate the knowledge level of community on disaster -> reduce the number of victim
- The index relies on empirical data that is far from being perfect. Tolerate
- Vulnerability can only be measured with a clear definition that can be operationalized. Blaikie et al define vulnerability as “the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard” (Blaikie et al, 1994, pg9).

Data Source

- Pilot survey of KAP2013 (Knowledge Attitude and Practice 2013) of estimated 250 HHs
- Village Potential Data (2010),
- Population Census 2010
- Environment Statistics Report.
- the National Agency of Disaster Management (BNPB) of which data in registration administration type based on the disaster report (victims and handling system).
- Literature Studies

Disaster Preparedness Index Measurement

9 elements 1) Hazard, risk and vulnerability assessments; 2) Response mechanisms and strategies; 3) Preparedness plan; 4) Coordination; 5) Information management; 6) Early warning systems; 7) Resource mobilization; 8) Public education, training, and rehearsals; 9) Community based disaster preparedness.

Disaster Preparedness Index Measurement

- REASONS : Activities carried out in an effort to eliminate and/or reduce the threat of disaster
- To see the level of community preparedness in anticipation of disaster
 - REDUCED CLASIFICATION into 5 group:
Disaster Knowledge (KD), Disaster Preparedness Policy (DPP), Emergency Response Plan (ERP), Disaster Early Warning (DEW) and Resource Mobilization (RM)

Disaster Preparedness Index

Measurement - Proportion (Yes)

$$P_{ix} = (35KD + 10DPP + 15ERP + 25DEW + 15RM)$$

Note:

- - KD: the proportion of “yes” to the questions of Disaster Knowledge parameter.
- - DPP : the proportion of “yes” to the questions of Disaster Preparedness Policy parameter.
- - ERP : the proportion of “yes” to the questions of Emergency Response Plan parameter.
- - DEW : the proportion of “yes” to the questions of Disaster Early Warning parameter.
- - RM : the proportion of “yes” to the questions of Resources Mobilization parameter.

Result of DPI

(Disaster Preparedness Indices)

- After to each parameter is multiplied by the weighting scores. The preparedness index scores
- LOW < 60 - 80 < HIGH
MEDIUM

Of household preparedness to disaster of all villages in the survey areas were categorized as almost moderate, ONLY two villages with EXACTLY the moderate values of household DPI had only a slight difference from the category boundary.

Knowledge , Attitute and Practice

- The high percentage (< 60 percent) gave response on the most likely their residential area have a high risk to be threated by natural disaster of earthquake and tsunami → already had remarkable knowledge on disaster
- More than 45.2 percent of respondents claimed that their area have already built tools/ preparedness facilities and/ or disaster mitigation.

Knowledge , Attitude and Practice

- The dissemination of information on rescue from disaster can be done amicably, by disseminating the knowledge about rescue from disaster to people in close proximity such as family, relatives, neighbours, and friends.
- Almost the other half who did not know the signs of the disaster in spite of the fact that their dwelling area (Padang) is an area highly prone to earthquake and tsunami disasters. I
- Many respondents did not know the signs of disaster that should have been predictable

Task of Governemnt and Others

- Providing more infra astructure for early warning system
- To support the community preparedness and as part of the efforts to rescue people from disaster, have also put up several alerting facilities and equipment such as evacuation signs, evacuation route maps, evacuation routes, sirens and other equipment.

Task of Governemnt and Others

- Those facilities are commonly used and put into practice to familiarize the people with evacuation activities, and furthermore to ensure that the equipment and facilities will function properly at any time a disaster occurs.
- making people aware of the risks that exist around them, capable to prevent disasters, willing to cope with the disaster that hit, and recuperate to normal life if affected by disaster.

Conclusion & Recommendation

- To increase their awareness and knowledge of resilience and adaptation of the community should be improved through participation in training or simulations of earthquakes.
- out of ten villages in the survey selected area only two villages, Air Tawar Timur and Gurun Laweh are categorized as having a moderate preparedness against disasters, while the rest have low level preparedness.

Conclusion & Recommendation

- The high knowledge of the respondents' survey whose located in the earthquake disaster is not accompanied by the availability of equipment or facility preparedness. Worstly, the availability of assets owned by the respondents' survey that can be used in case of disaster is still inadequate in terms to support the resilience and adaptation.
- People have started to recognize the notification made by the government in terms of the possibility of disaster occurrence is very important

Thank you

Survei dilakukan dengan cara:
Wawancara tatap muka

250 Rumah Tangga sebagai Responden

Memilih 10 desa secara purposive dari daftar 25 desa daerah rawan bencana di Kota Padang yang telah ditentukan oleh BNPB.

Memilih sebuah blok sensus secara **purposive** di setiap desa terpilih tahap pertama.

Memilih 25 rumah tangga untuk setiap blok sensus terpilih Pilot Survei KAP 2013 secara sistematis dari Daftar PKAPS13-P.

Daftar Desa Terpilih

No	Kecamatan	Desa
1.	Padang Barat	Belakang Tangsi
2.		Olo
3.		Purus
4.	Padang Utara	Ulak Karang Utara
5.		Air Tawar Timur
6.		Air Tawar Barat
7.		Lolong Belanti
8.	Nanggalo	Gurun Laweh
9.		Surau Gadang
10.		Kurau Pagang

Tingginya pengetahuan responden terhadap bencana gempa bumi tersebut tidak dibarengi dengan ketersediaan peralatan atau fasilitas kesiapsiagaan.

Kepemilikan aset yang dapat digunakan responden jika terjadi bencana masih belum memadai.

Masih rendahnya tingkat kesiapsiagaan terhadap bencana menjadi tugas bersama antara pemerintah dan masyarakat.

Peran dari pemerintah daerah setempat perlu ditingkatkan dengan menyediakan peralatan atau fasilitas kesiapsiagaan serta mengaktifkannya.

Pilot Survei KAP diharapkan dapat menjadi pembelajaran dan acuan untuk survei KAP, yang berikutnya diharapkan dapat dilakukan dalam skala yang lebih besar, baik skala provinsi maupun nasional.