

BNPB

Indonesia Experience on Development Disaster-Related Statistics Data

Agus Wibowo Head of Data Division The Centre of Data, Information and Public Relation National Agency for Disaster Management (BNPB) Email: agus.wibowo@bnpb.go.id, website: http://www.bnpb.go.id



DISASTER DEFINITION

According to The Law No 24/2007 about Disaster Management, Chapter 1: general requirement, section 1:

"Disaster is an event or a series of events that threaten and disrupt the lives and livelihoods of the people caused by either natural factors and/or non natural factors or man-made factor causing the loss of lives, environmental damage, loss of material possession, and psychological impact".



DISASTER TYPES

Natural Disaster

- (1) earthquake, (2) tsunami, (3) volcanic eruption, (4) flood, (5) drought, (6) hurricane/typhoon, (7) land-slide.
- Non-Natural Disaster
 - (8) technological failure, (9) forest/land
 fire, (10) epidemic, (11) disease.
- Social Disaster
 - (12) community or social conflict, (13) terrorism.

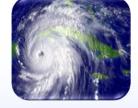










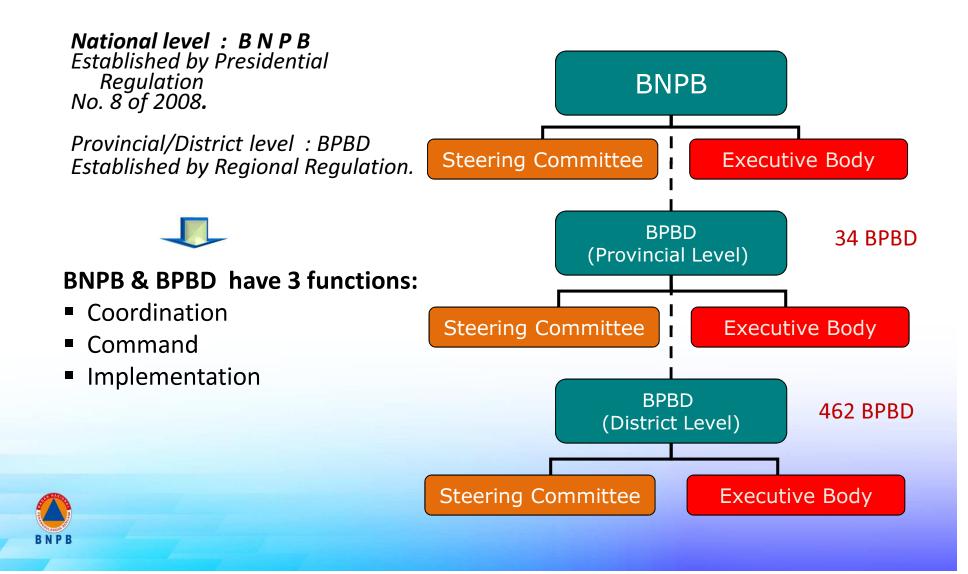




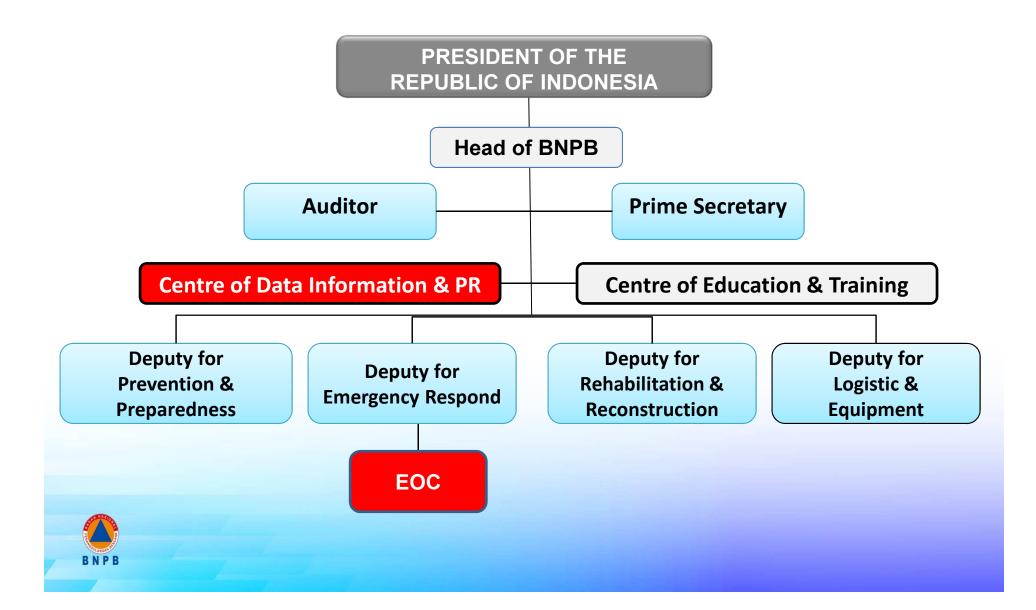




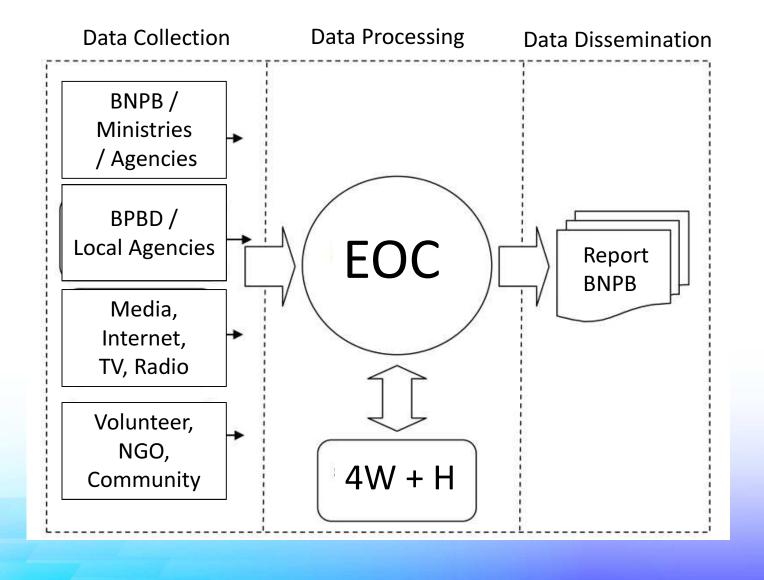
The Agencies for Disaster Management



Organization Structure

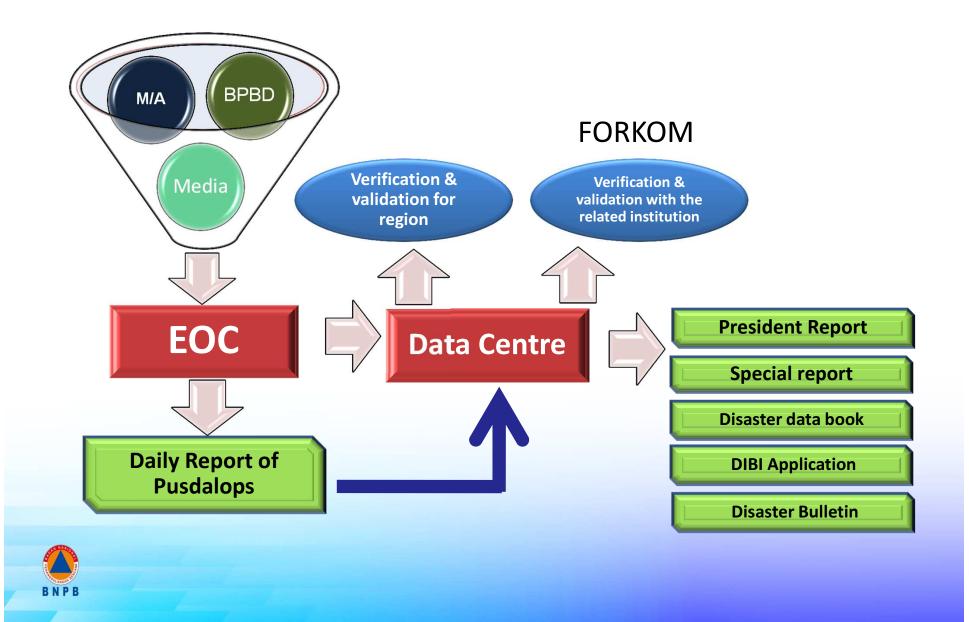


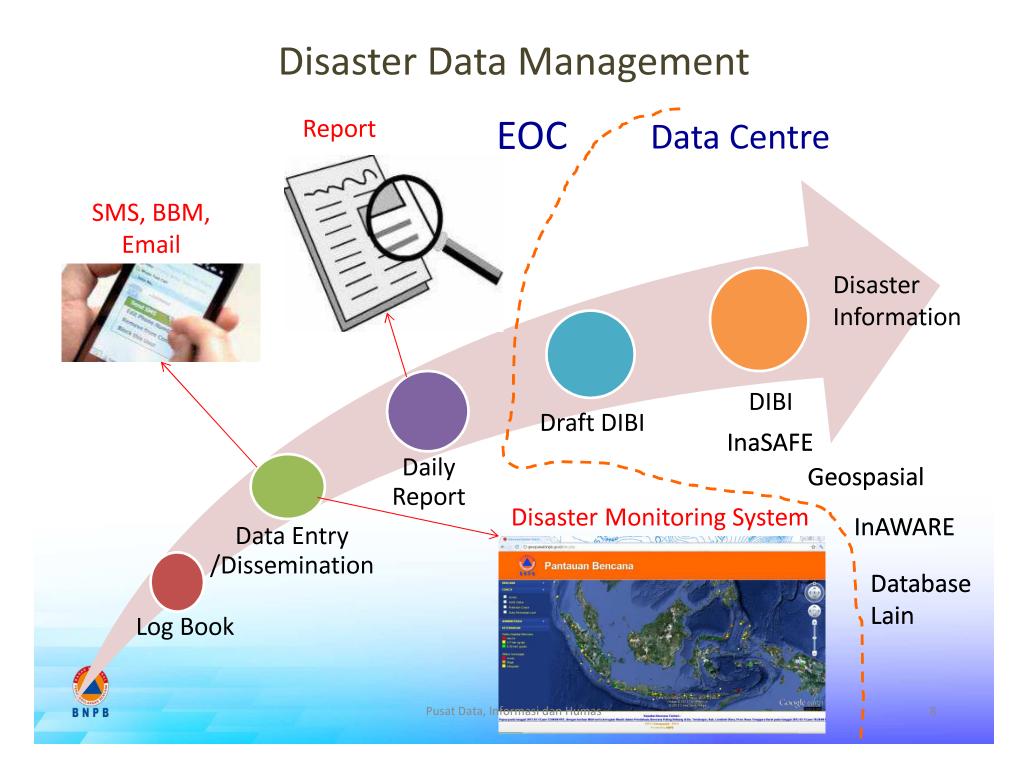
Disaster Data Flow Collection



BNPB

Data Management Mechanism





Disaster Declaration



Beginning and end of disaster period

- Mechanism of the emergency declaration:
 - Initial information of the disaster event
 - Assignment of Quick Response Team (TRC) for damage level assessment.
 - Emergency declaration and determine the level disaster (Regent / Mayor for District / City level, Governor for Province Level and President for National Level Disaster).
 - Establishment of Disaster Emergency Response Command
- Emergency phase is declared for 14 days and can be extended according to the situation.



Disaster-Affected Population

The victim is the person / group of people who have been adversely affected by the disaster, such as damage or loss of property, or the suffering and loss of life. Victims can be classified as 1) deaths, 2) missing, 3) injury / illness, 4) suffering and displaced.

- The deaths are reported killed or died as a result of the disaster.
- The missing is the person reported lost or missing or unaccounted for after the disaster.
- The injury / illness are those who were injured or sick, in a case of minor injuries, and severe injuries / weight, both outpatient and inpatient.
- The suffering and displaced is a person or group of people who are suffering from the adverse effects of disasters, such as damage to or loss of property, but still can occupy their residence.



What types of material damage is covered in disaster impact assessments, and how do you estimate the monetised value of such impacts?

- Settlements: settlements, roads, drinking water systems
- Infrastructure: land transportation, water transportation, air transportation, drainage systems, electrical systems
- Productive economy: agriculture, farming/plantation, animal husbandry, fisheries, trade, industry, tourism
- Social: education facility, religious facility, health facility
- Cross sector: offices, banking, environment.





- Name of Database : Disaster Data and Information of Indonesia (DIBI)
 - URL of Database: <u>http://dibi.bnpb.go.id</u>
 - Sources of Data : Government of Indonesia
 - ▶ Period of Data : 1815 2014
 - Host agency: National Agency for Disaster Management (BNPB)
 - Staff : 1 of Head of Data Information & PR Centre and 23 staffs
 - Data collection: Using paper-based data collection format from government validated data

Disaster Type in the Database

- Landslides
- Earthquake
- Tsunami
- Earthquake and Tsunami
- Eruption
- Floods
- Floods and Landslides
- Drought
- Surge

- Industrial Accident
- Transportation Accident
- Forest Fire
- Conflict
- Terrorism
- Epidemic
- Plague
- Strong wind



BNPB Disaster Data & BPS (National Statistics Office) Data



Disaster Database

Population Database

Provinsi	Jenis Bencana	Variabel Bencana	Tahun Bencana
ACEH	AKSI TEROR / SABOTASE	DataCards	1815
SUMATERA UTARA	BANJIR	Jumlah Kejadian	1816
SUMATERA BARAT	BANJIR DAN TANAH LONGSOR	Meninggal	1817
RIAU	GELOMBANG PASANG / ABRASI	Terluka	1818
JAMBI	GEMPA BUMI	Hilang	1819
SUMATERA SELATAN	GEMPA BUMI DAN TSUNAMI	Rumah Rusak Berat	1820
BENGKULU	HAMA TANAMAN	Rumah Rusak Ringan	1821
AMPUNG	KEBAKARAN HUTAN DAN LAHAN	Terdampak	1822
BANGKA BELITUNG	KECELAKAAN INDUSTRI	Relokasi	1823
KEPULAUAN RIAU	KECELAKAAN TRANSPORTASI	Evakuasi	1824
OKI JAKARTA	KEKERINGAN	Kerugian (\$)	1825
JAWA BARAT	KLB	Kerugian (RP)	1826
IAMA TENGAH	KONELIK / KERLISLIHAN SOSIAL	Sarana Pandidikan	1827
Sensus Penduduk 2010	Potensi Desa 2011	Proyeksi Penduduk (Provinsi)	Tahun Proyeks
Jenis Kelamin : Laki-laki	Ada pengaduan masyarakat terhadap pencemaran tan:	0-4	2010
Jenis Kelamin : Perempuan	Ada pencemaran udara selama setahun terakhir	5-9	2011
Jumlah Rumah Tangga	Sumber pencemaran udara yang paling utama	10-14	2012
Penduduk Perempuan : 0-4	Ada pengaduan masyarakat terhadap pencemaran uda	15-19	2013
Penduduk Perempuan : 5-6	Ada pembakaran lahan untuk memulai usaha pertanian	20-24	2014
Penduduk Perempuan : 7-9	Apakah pembakaran lahan tersebut menyebabkan penc	25-29	2015
opulation Census		30-34 35-39 Population F	Projection
Perduduk Perempuan 13-14	Ada lo asintenapera go on to on the adaptive ada	35-39 I Opulation I	2017
Penduduk Perempuan : 15	Banyaknya kejadian bencana tanah longsor selama 3 ta	40-44	2018
Penduduk Perempuan : 16	Jumlah korban jiwa akibat bencana tanah longsor selarr	45-49	2019
Penduduk Perempuan : 17	Kerugian materi (jutaan Rp) akibat bencana tanah longs	50-54	2020
Penduduk Perempuan : 18	Ada bencana banjir selama 3 tahun terakhir	55-59	2021
Panduduk Perempuan - 10	Ranvaknua kajadian hancana hanjir salama 3 tahun tars	60-64	2022

OK Reset





Example Data

Beranda Profil Data	Analysis Petunjuk Tentang DIBI Data Kependudukan		Englist	
Data Kependudukan Data Ben	cana & Kependudukan Grafik			
Provinsi	Jenis Bencana	Variabel Bencana	Tahun Bencana	
LAMPUNG BANGKA BELITUNG KEPULAUAN RIAU DKI JAKARTA JAWA BARAT JAWA TENGAH DI YOGYAKARTA JAWA TIMUR BANTEN B A L I NUSA TENGGARA BARAT NUSA TENGGARA TIMUR TIMOR TIMUR	AKSI TEROR / SABOTASE BANJIR BANJIR DAN TANAH LONGSOR GELOMBANG PASANG / ABRASI GEMPA BUMI GEMPA BUMI DAN TSUNAMI HAMA TANAMAN KEBAKARAN HUTAN DAN LAHAN KECELAKAAN INDUSTRI KECELAKAAN TRANSPORTASI KEKERINGAN KLB KONELIK / KEBLISI IHAN SOSIAI	DataCards Jumlah Kejadian Meninggal Terluka Hilang Rumah Rusak Berat Rumah Rusak Berat Rumah Rusak Ringan Terdampak Relokasi Evakuasi Kerugian (\$) Kerugian (RP) Sarana Pendidikan	2003 2004 2005 2006 2007 2008 2009 2010 2011 2011 2012 2013 2014	
Sensus Penduduk 2010	Potensi Desa 2011	Proyeksi Penduduk (Provinsi)	Tahun Proyeksi	
Jenis Kelamin : Laki-Jaki Jenis Kelamin : Perempuan Jumlah Rumah Tangga Penduduk Perempuan : 0-4 Penduduk Perempuan : 5-6 Penduduk Perempuan : 10-12 Penduduk Perempuan : 13-14 Penduduk Perempuan : 15 Penduduk Perempuan : 16 Penduduk Perempuan : 17 Penduduk Perempuan : 18	Apakah pembakaran lahan tersebut menyebabkan pencen Ada lokasi penggalian golongan C (batu kali, pasir, kapur, l Ada bencana tanah longsor selama 3 tahun terakhir Banyaknya kejadian bencana tanah longsor selama 3 tahu Jumlah korban jiwa akibat bencana tanah longsor selama 3 Kerugian materi (jutaan Rp) akibat bencana tanah longsor Ada bencana banjir selama 3 tahun terakhir Banyaknya kejadian bencana banjir selama 3 tahun terakh Jumlah korban jiwa akibat bencana banjir selama 3 tahun t Kerugian materi (jutaan Rp) akibat bencana banjir selama 3 tahun t Kerugian materi (jutaan Rp) akibat bencana banjir selama 3 Ada bencana banjir bandang selama 3 tahun terakhir Banyaknya kejadian bencana banjir bandang selama 3 tah	25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-69 70-74 75+ Total	2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2021 2022	

OK Reset



Example Data

No			Data E	Bencana	SP 2010			PODES 2011			PROYEKSI PENDUDUK	
										2015		
	Provinsi		BANJIR DAN TANAH LONGSC	BANJIR DAN TANAH LONGSOR	Jenis Kelamin		Jumlah Rumah Tangga	Ada bencana banjir selama 3 tahun terakhir		Banyaknya kejadian bencana banjir	Total	
				Jumlah Kejadian Laki-lak	Laki-laki	Perempuan	Jumlah	Ada	Tidak ada	selama 3 tahun terakhir	Laki-Laki	Perempuan
1	11	ACEH	78	1	2.248.952	2.245.458	1.066.524	1.301	4.594	4.956	2.497.491	2.504.462
2	12	SUMATERA UTARA	67	1	6.483.354	6.498.850	3.037.665	555	4.228	1.494	6.954.552	6.983.245
3	13	SUMATERA BARAT	54	10	2.404.377	2.442.532	1.152.490	62	309	159	2.584.192	2.612.097
4	14	RIAU	30	0	2.853.168	2.685.199	1.328.616	320	1.261	761	3.257.561	3.086.841
5	15	JAMBI	39	2	1.581.110	1.511.155	770.787	325	879	767	1.736.049	1.666.003
6	16	SUMATERA SELATAN	45	0	3.792.647	3.657.747	1.813.578	483	2.588	1.071	4.092.177	3.960.138
7	17	BENGKULU	8	1	877.159	838.359	432.900	211	1.232	465	956.265	918.679
8	18	LAMPUNG	42	2	3.916.622	3.691.783	1.934.612	409	1.948	995	4.162.437	3.954.831
9	19	BANGKA BELITUNG	0	0	635.094	588.202	311.191	10	291	20	713.223	659.590
10	21	KEPULAUAN RIAU	3	o	862.144	817.019	441.824	24	307	112	1.007.979	965.064

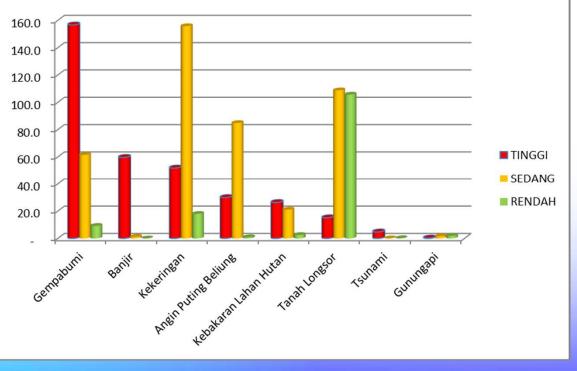




Population Exposed to Hazard

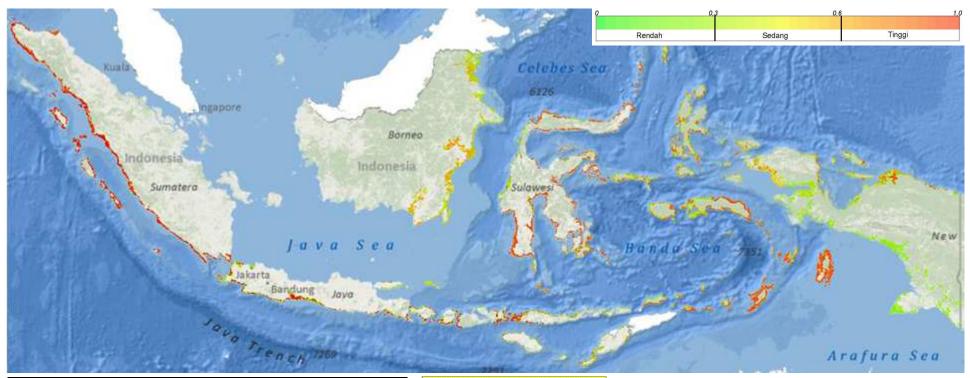
	Jumlah Penduduk Terpapar (Juta)				
Jenis Bencana	Tinggi	Sedang	Rendah	Total	
Gempabumi	156.7	61.5	9.2	227.4	
Banjir	59.7	1.2	0.0	60.9	
Kekeringan	51.9	155.8	18.0	225.6	
Angin Puting Beliung	30.0	84.8	0.9	115.7	
Kebakaran Lahan Hutan	26.4	21.1	2.5	50.0	
Tanah Longsor	15.2	108.8	105.6	229.6	
Tsunami	4.8	0.1	0.2	5.0	
Gunungapi	0.3	1.6	1.9	3.8	

- 1. Earthquake (227.4 million)
- 2. Landslide (229.6 million)
- 3. Drought (225.6 million)





Indonesia Tsunami Hazard Map

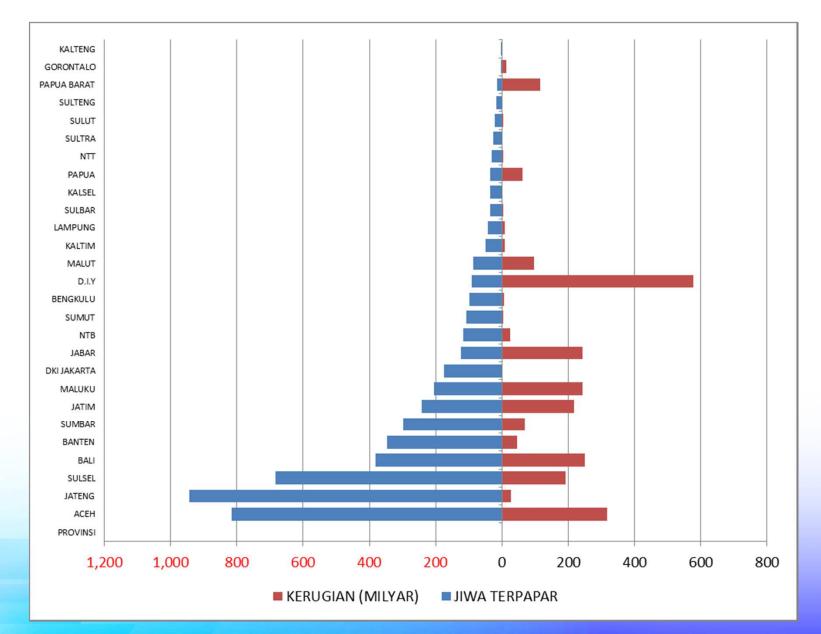


KELAS ANCAMAN	KETINGGIAN GENANGAN MAX (M)	JUMLAH KABUPATEN	JIWA TERPAPAR (JUTA)	PERSENTASE (Total Penduduk Indonesia)	
SANGAT TINGGI	>5	46	4.3	1.82%	
TINGGI	3-5	127	0.4	0.19%	
SEDANG	1-3	27	0.1	0.02%	
RENDAH	<1	33	0.2	0.09%	
тот	AL	233	5.0	2.12%	

- **3 Provinsi dengan** jiwa terpapar tertinggi: Jawa Tengah 1.
 - 2. Aceh
 - Sulawesi Selatan
- 3.
- 233 kabupaten/kota terancam tsunami di Indonesia
- 5 juta penduduk terpapar (2.12% dari total penduduk Indonesia)
- Kerugian yang ditimbulkan adalah 80.4 T •



Number of Population Exposed to Tsunami Hazard



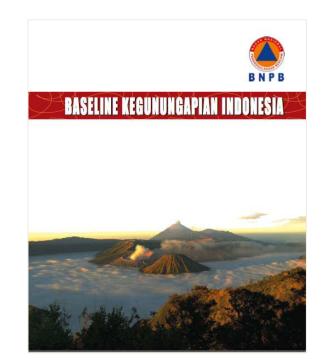
B N P B

Other Disaster Data Used





Disaster Fact sheet (Monthly)



Baseline Data









