

## **Current Disaster Information**

### Hazards

Geographically, Indonesia is located in South East between two Ocean which are Indian and Pacific Ocean. As a tropical country, Indonesia has fertile land with tropical forest on it. However in the last several years, many tropical forest regions have been damage due to the increasing land demand as an effect of demographic growing (The number of Indonesian Population exceeds 220 million in the year of 2000). As a result, environment quality is decreasing thus generates, or at least exacerbated the worse impact of natural disaster.

Indonesia is well known as active tectonic region. It consists of three major active tectonics plates which are Euasia in the north, Indian Ocean-Australia in the south and pacific plate in the east. The plate movements generate subduction type of boundary which takes control on volcanic arc building and produces Sumatera Island, Java Island, Nusa Tenggara and maluku.





Besides island arc building, the subduction processes also generate seismic active belt along the volcanic arc. Fortunately, shallow epicenter earthquakes usually occur in the remote areas with less number of populations. However in some cases major earthquake stroke dense populated region such as Bengkulu, Liwa, bali and Nusa Tenggara (Flores Island). Another type of natural hazards are generated by the tectonic activities are Volcanic Eruption and Tsunami. Some active transforms faults are well known as earthquake generator are The Great Sumatra Fault (Sumatra Island), Palu-Koro (Central Sulawesi/Celebes) Fault and Sorong Fault (Papua Island)

Indonesia consists of more than 500 young volcanoes including 128 active volcanoes. It is representing 15 % of the active volcanoes in the world. The most active volcano in Indonesia is Merapi which is situated 20 kilometers to the north of Yogyakarta. This volcano has been observed continuously by means of telemetric equipment as well as field investigation. Thus, volcanic eruption disasters can be mitigated very well. Many others have also observed quite well in order to minimize volcanic eruption impact.



The Distribution of Volcanoes in Indonesia

Other natural disasters which are generated by or exacerbated by human activities are floods, landslides, drought, land/forest fire. Those are believed as an impact of land or environmental degradation. In the monsoon, Indonesia is threatened by flood and/or landslides which caused loss of human life and property. On the other hand in the dry season, we are facing drought and land/forest fire as well as urban and building fire. Coping with those disasters Indonesian Government was launching a National Movement for Environment Rehabilitation Policy by conducting land rehabilitation and forestation. It was launched by H.E President of the Republic of Indonesia on January 21st 2004 in Gunung Kidul District where is known as mountainous infertile region which is administratively under Yogyakarta Province in Java Island.

Drought is another serious problem faces in the dry season between April and September. Government assisted to have priceless rice and other livestock. This condition also effects on hydro power supply due to significantly lower of water in many reservoir and forest fire. Those types of disasters are considered to be generated by environmental degradation due to deforestation.

Besides natural disaster, Indonesia is also facing man-made type of disaster. The nation of Indonesia is composed of multi ethnics, tribes and religions. This condition is vulnerable to the social conflict which is usually followed by setting fire and demolition of building or settlement.

#### Major Disaster in Indonesia in the year 2004

Floods and landslides were predominantly Indonesia's natural disasters in 2004. The global climate changes and regional climate condition were most likely influenced on those natural disasters. Human activities are also exacerbated the disaster. The regional integrated climate monitoring by means of climate data and information exchange will be very useful.

Sunday morning 26th of December 2004, at 07.58 local time, a huge earthquake by magnitude 6.8 Richter scale (body wave) or 8.1 Richter scale (magnitude moment) hit Aceh and its surrounding. The Shock can be felt in a very wide spread from Banda Aceh to Medan. The most worst impact of earthquake it self was Banda Aceh and Meulaboh where the intensity of the earthquake exceeds VII - VIII MMI (Modified Marcalli Intensity). Many buildings collapsed, few minutes after the shock tsunami wave swept collapsed building material and everything on the ground away. In some places tsunami wave exceeds more than 5 meter. The impacts devastated more than 500 km long of shore line from South Aceh - West Aceh - Banda Aceh and North Aceh where the length is about 500 km. The tsunami generated by Earthquake has also hit Nias Island (one of the district of North Sumatra Province). The propagation of tsunami waves reached the east coast of Africa. Total Loss of live exceeds 150,000 for the whole impacted area.

Due to the widely impact of disaster, Indonesian Government declared National State of Disaster Emergency. Thus, the emergency relief operations have been taken. The operation is not only done by government but also participated by private sector and communities either local, National or international. The attention of National and international communities are very surprisingly. The emergency relief assistance came very fast to Indonesia. Due to very wide spread of disaster impact and collapse of government System in the province of Nanggroe Aceh Darussalam the operation faces many obstacles. However, continuously efforts by all participants in the operation have emerged a new hope that the disaster can be handled and the future plan of rehabilitation and reconstruction are on going.

The impact recorded in the National Operation Center in BAKORNAS PBP Jakarta was Predicted more than 94.000 people died, 70.000 missing and 500.000 displaced and lives in the temporary Shelters. In the future we hope that Indian oman where known as an earthquake and tsunami prone area can be equipped by integrated tsunami early warning system which can give a tsunami warning to the people living in along the coast from Southern Cost of Indonesia to Malaysia, Thailand, India and Sri Lanka. It will reduce tshnami disaster risk of the people living there.



Satellite imagery of the northern coast of Banda Aceh is comparing situation before (left) and after (right) incident.







The situation of Banda Aceh after disaster, rabble and dead bodies of victims mixed up everywhere over the whole city. It makes condition worse because of lack of heavy equipment for clearing up. The bad environment sanitation can generate other problem of outbreaking diseases after disaster.

No	Type of Disaster	Number of Event	Causalities	
			Died	Displaced
1	Storm	72	15	2,435
2	Flood	112	79	77,526
3	Earthquake	20	78	6,442
4	Fire	140	36	16,795
5	Forest Fire	22		-
6	Social Conflict	11	516	18,692
7	Technological Failure/ Tranoportation Accident	1	21	-
8	Epidemic	21	265	-
9	Volcanic Eruption	5	2	14,558
10	Landslide	58	122	3,297
11	Environmental Pollution	2	2	1,007
12	Tidal wave	5		706
13	Earthquake/Tsunami *)	1	84,827	398,285
	TOTAL	470	85,833	539,743

#### Table 1. Disaster in Indonesia in 2004

 $\ensuremath{^*}\xspace)$  Data collecting still in progress Compiled and analyzed by BAKORNAS PBP Secretariat

The duties of BAKORNAS PBP are:

- To formulate and decide a national disaster management policies and strategies.
- To coordinate the implementation of disaster management activities before, during and post disaster.
- Rendering guidance and directive on related policies in the efforts to manage disaster (prevention, mitigation, response, rehabilitation and reconstruction).

The BAKORNAS PBP (based on Presidential Decree No. 111/2001) is composed of:

- Vice President of the Republic of Indonesia (chairman)
- Coordinating Minister for Peoples Welfare (vice chairman)
- Minister of Interior (member)
- Minister of Social Affairs (member)
- Minister of Health (member)
- Minister of Settlement and Infrastructures (member)
- Minister of Communications (member)
- Minister of Finance (member)
- Commander in chief of the Armed Forces (member)
- Head of National Police (member)

Secretary of Vice President (secretary)

To support the duties of BAKORNAS PBP, it was established a Secretariat led by Secretary of BAKORNAS PBP.

Secretary of BAKORNAS PBP assisted by Vice Secretary and 4 (four) Deputies (Disaster Management, IDP's Management, Cooperation and People Participation, Administration).

The establishment of BAKORNAS is followed by the establishment of similar organizations to cope with disaster and IDP's in provincial as well as district level.

In provincial level, it is established SATKORLAK PBP (Coordination of Implementing Unit) consist of related services, chaired by the Governor.

To cope with disaster in the location, in the district / municipal level is established SATLAK PBP (Implementing Unit), which is chaired by Bupati (Head of District) / Mayor. The SATLAK compose of SATGAS (task forces) of the institutions and services concerned such as health, SAR, army, police, social, public works, Indonesian Red Cross (PMI) and NGO's. District units as front line organization can mobilize all related agencies at their respective districts, sub-districts and villages as well as local community organizations.

The Structure of Disaster Management in Indonesia as follows:



District / Municipal level

### Plans

The government has formulated National Development Plan (RKP) for the period of 5 years (2005-2010). This program becomes a guideline for each sector and ministerial cabinet, as well as the regional government in planning their respective development program.

Effort undertaken by government for risk reduction is designing National Disaster Management Plan, which is currently under construction. In absence of disaster management plan, disaster management measures cannot be possibly incorporated into the NationI Development Plan. For that purpose, National Disaster Management Plan is urgently needed.

### **Training Courses**

Improving knowledge about disaster in all aspects is required not only for government official but also for the community. The better understanding on disaster management will significantly reduce the impact of disasters.

Promotion of community awareness particularly those who live in disaster's prone areas have to be prioritized. Empowering communities is concducted by optimizing their own resources and by providing initial limited incentives to enable them to help themselves. Mapping of disaster prone areas in line with disaster information system are also important.

BAKORNAS PBP has made a module to conduct a Basic Training in Disaster Management for SATKORLAK and SATLAK staff. It is also some training such as Emergency Management and Contingency Planning (in cooperation with UNHCR).

### Experts

No	Name	Subject	Institute	No. Phone
1	Dr. Jan Sopahuapakan	Geotechnology	LIPI	022 2503654
2	Dr. Ir. Hery Harjono	Earthquake	LIPI - Geotechnology	62 22 8757075
3	Dr. Ir. Harkunti P. Rahayu	Disaster Mitigation	Institut Teknologi Bandung	62 811238946 Fax 62 22 2503961
4	Dr. Nanang T. Puspito	Tsunami/Geophysics	Institut Teknologi Bandung	62 811238946
5	Fauzy, PhD.	Earthquake/Tsunami	BMG (Meteorological and Geophysical Agency)	62 21 6546311 ext 5318 62 21 6546316 Fax 62 21 4246703
6	Ir. Erna Sri Adiningsih	Remote sensing	LAPAN	62 21 4892802
7	Dr. Paulus Agus Winarso	Climate	BMG (Meteorological and Geophysical Agency)	62 21 6546311 Fax 62 21 4246703
8	Dr. Krishna S Pribadi	Disaster Mitigation	Departemen Teknik Sipil ITB Jln Ganesha 10 Bandung 40132	022 2510718 022 2502272
9	Dr. Dwikorita Karnawati	Landslides	UGM - Yogyakarta	62 274 562880
10	Dr. Agus Maryono	Floods/Hydrology	UGM - Yogyakarta	62 811254254
11	Dr. Bambang Hero	Forest fire	IPB (Bogor Institute of Agriculture)	
12	Dr. Gatot Irianto	Floods/Hydrology/ Agro-Climatology	Center for Soil & Agroclimate Research Jl. Juanda 99 Bogor	
13	Ir. Engkon Kertapati	Earthquake	P3G, Diponegoro 57, Bandung	
14	Dr. A Djumarma	Volcanology	Directorate of Volcanology and Geological hazards Mitigation Jln Diponegoro 57, Bandung	62 22 7272606 Fax 62 22 7202761
15	Dr. Surono	Landslides	Directorate of Volcanology and	62 22 7272606

## Person in charge of the ADRC Activities

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## **Archives of of Disaster Related Websites**

No	Institution	Website
1	BAKORNAS PBP (The National Coordinating board for Disaster and IDPs Management)	www.bakornaspbp.go.id
2	Directorate of Volcanology and Geological Hazard Mitigation	www.vsi.esdm.go.id
3	Meteorological and Geophysical Agency	www.bmg.go.id
4	Ministry of Environment	www.menlh.go.id
5	National Agency for Survey and Mapping	www.bakosurtanal.go.id
6	Indonesian Red Cross	www.palangmerah.or.id
7	Indonesian Geologist Association	www.iagi.or.id
8	Ministry for Research and Technology	www.iptek.net.id
9	Indonesian Disaster Management Society	www.mpbi.or.id

# Proposal to ADRC

ADRC should take initiatives

- To take some efforts in reducing the risk of natural disaster in the southeast Asia especially for tsunami by setting up integrated early warning system in
- the Indian Ocean Region.
  To set up information center which provides any related natural disaster information especially for early detecting for hydrometeorological hazards such as storm, tropical cyclone and other meteorological animalies.

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