INTRODUCTION

Full Name : Republic Indonesia
Area : 1,904,000 sq Km
Capital City : Jakarta

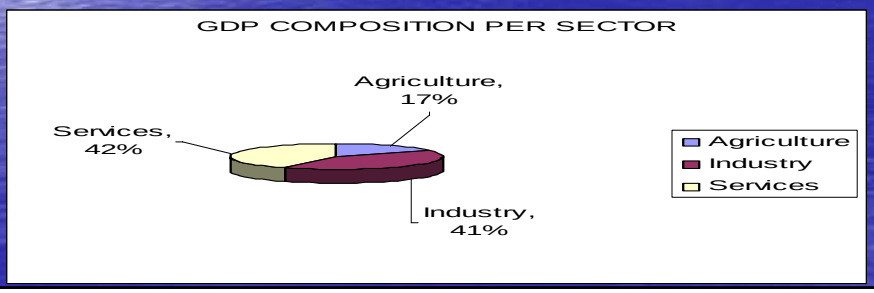
INDONESIAN PROFILE

Population	:	More than 210 Million People (2002)
Season	:	Dry and Rainy Season
Total Number Of Island	:	17.583 Islands
Total Number Of River	:	500 Rivers (Big and Small Rivers) (30% Crossed the high density population area)
Total Number Of Forest	:	The third largest tropical forest in the world
Total Number Of Volcanoes	:	More than 500 Volcanoes (128 of which are active)
Total Number Of Ethnic Group	:	More than 200 Ethnic Group
Total Number Of Local Language	:	583 Dialect and Languages
Religion	:	Moslem (98%), Protestant + Catholic + Hindus + Budhis (2%)
Goverment Structure	:	- Central Level : Resident & the Cabinet - Provincial Level : 33 Provincial Government Level - District Level : more than 325 district Government Level

1 **The conditions leading to natural disaster & social conflict**

Economic and business

GDP per real growth rate : 3,3 % (2001)
GDP per Capita : $ 730 (2000)
Agriculture product : Rice, Tapioca, Peanuts, rubber, cocoa, coffee, Palm oil, copra, poultry, beef.
Industries : Petroleum, natural gas, textiles, apparel and footwear, mining, cement, chemical, fertilizers, plywood, rubber, food, tourism.



DISASTER CONDITION :
. THREAT
. CASES

DISASTER SITUATIONS

- Disaster Threat (1)
  - Indonesia is situated in geographically between Asia and Australia continents, the Indian and Pasific Oceans
  - It is located in the active tectonic zone and composed of parts of three crustal plates (Eurasian plate in the north, Indian-Australian plate in the south, and Pasific Ocean floor plate in the northeast)
  - Situated in the three regional mountain systems (Alpine Sunda, Circum Pasific and Circum Australian)

8

DISASTER SITUATIONS

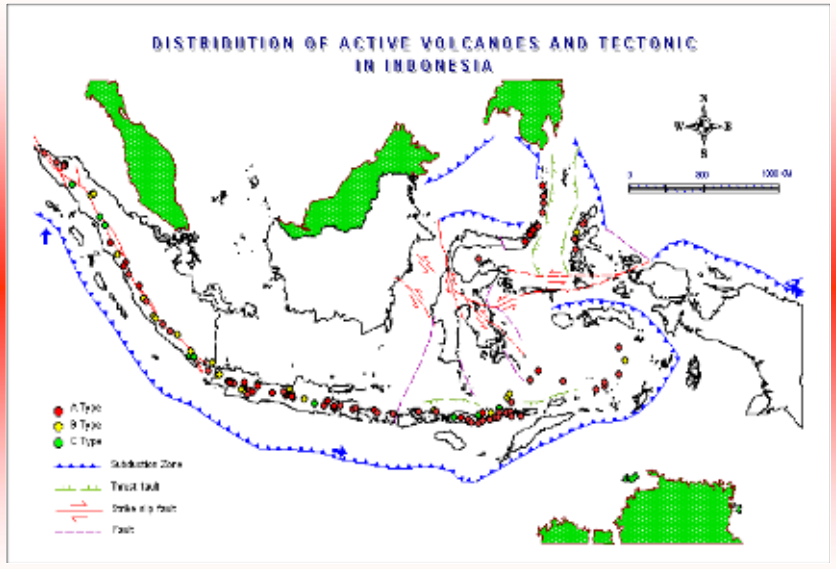
- Disaster Threat (2)
  - The seismic sources will raise earthquacke, which can be generated by subduction zone and active fault (ie. The Great Sumatera Fault, Palu-Koro Fault and Sorong Fault which are wellknown as source of demaging earthquackes)
  - The subduction lies in the southwestern of Sumatera, south of Java, some part of Maluku and Papua

9

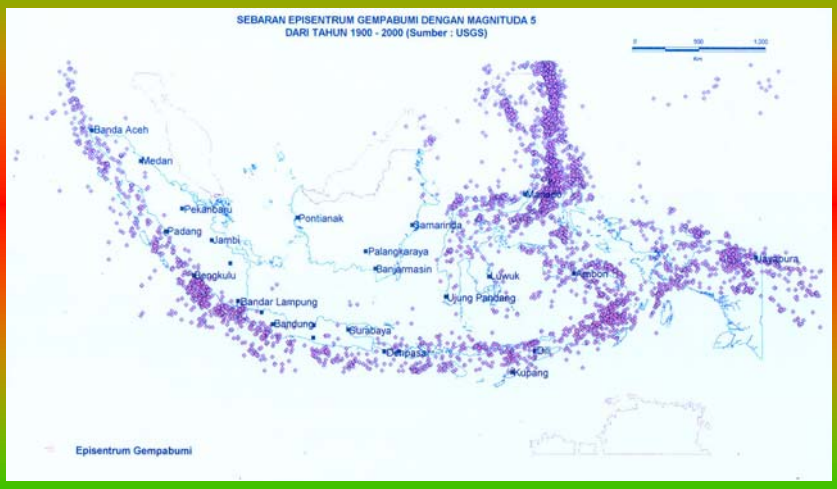
DISASTER SITUATIONS

- Disaster Threat (3)
  - The volcanic areas occupied by more than 500 young volcanoes which are discrebed as 128 active volcanoes. It is representing 15% of the active volcanoes in the world.
  - Mass movement such as landslide and rock falls can be occure on such condition as steep slope, type of rock, fractured and highly intense weathered of rock, highly intense of precipitation and bad land management

10

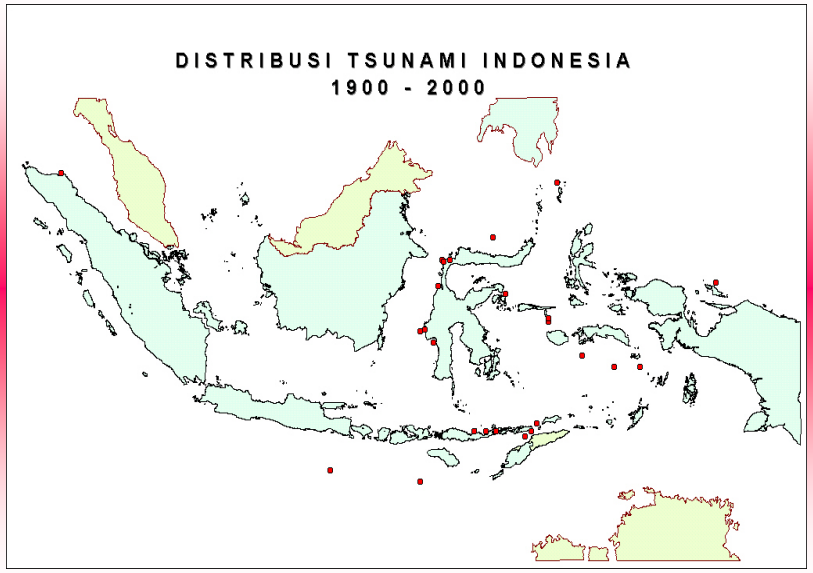


EARTHEQUAKE EPICENTRUM DISTRIBUTION OF INDONESIA



VICTIM OF EARTHQUAKE AND TSUNAMI

District	Province	Year	Caused by	People died
Krakatau			Tsunami	> 36.000
Banyuwangi	Jawa Timur	1994	Tsunami	224
Flores	NTT	1995	Tsunami	2094
Biak	Irian Jaya	1996	Tsunami	> 200
Kerinci	Sumatera Barat	1996	Gempabumi	34
Liwa	Lampung	1996	Gempabumi	19

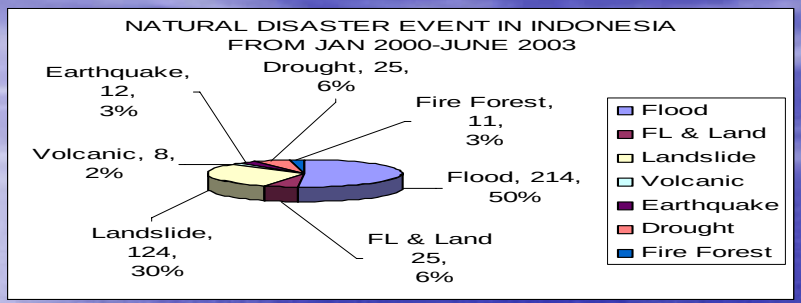


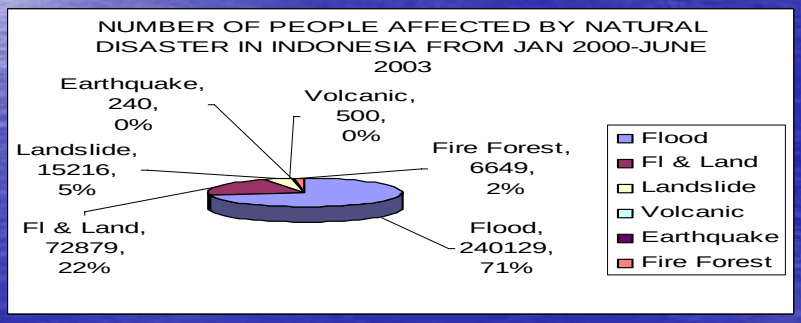
EARTHQUAKE Damage,
MAJALENGKA, WEST JAWA
28 Juni 2001

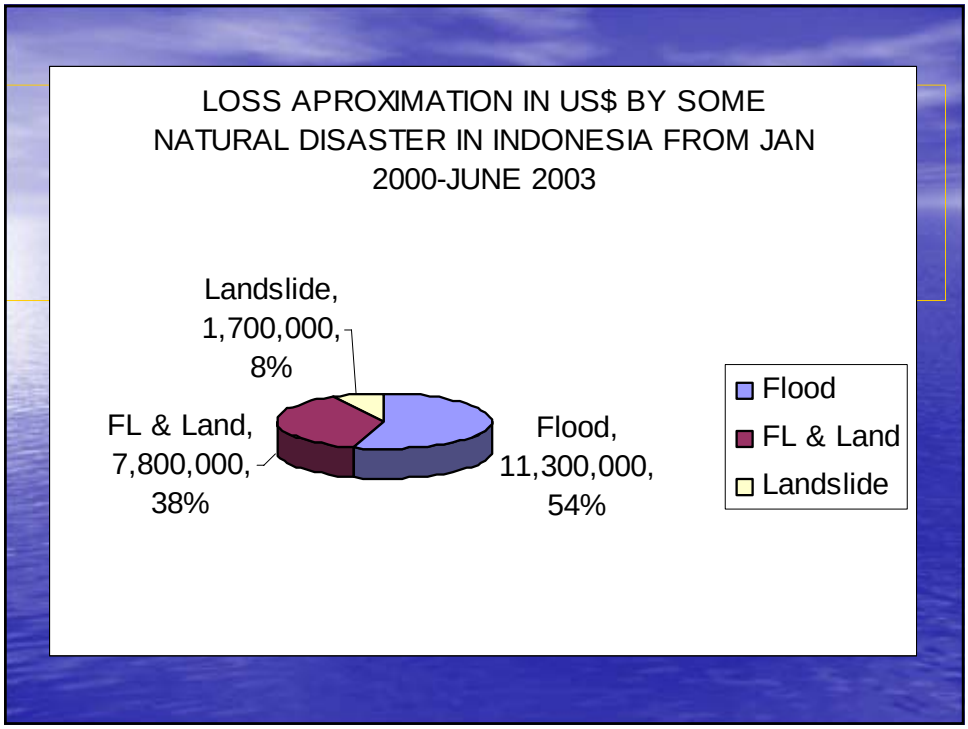
LOCAL DISTRICT	HOUSE DAMAGE
Talaga	1223
Bantarujeg	773
Cingambul	104
Lemah Sugih	38
Banjaran	42

NATURAL DISASTER CASES IN 10 YEARS

- Earthquake in Majalengka district .
- Flash flood, debris flows and slide in Nias island , North Sumatra (hundreds people as victim).
- Forest fire and haze, Kalimantan and Sumatera in dry season (thousands people affected).
- Pollution many cases (water, air), become potential threat (eg. chemical industrial incident in Gresik , East Java (many people affected).
- Landslides, debris flows and floods happens each year (many victims, and loss of properties).






LOSS APROXIMATION IN US$ BY SOME NATURAL DISASTER IN INDONESIA FROM JAN 2000-JUNE 2003
Landslide, 1,700,000, 8%
FL & Land, 7,800,000, 38%
Flood, 11,300,000, 54%
Flood
FL & Land
Landslide


POLICY AND ORGANIZATION

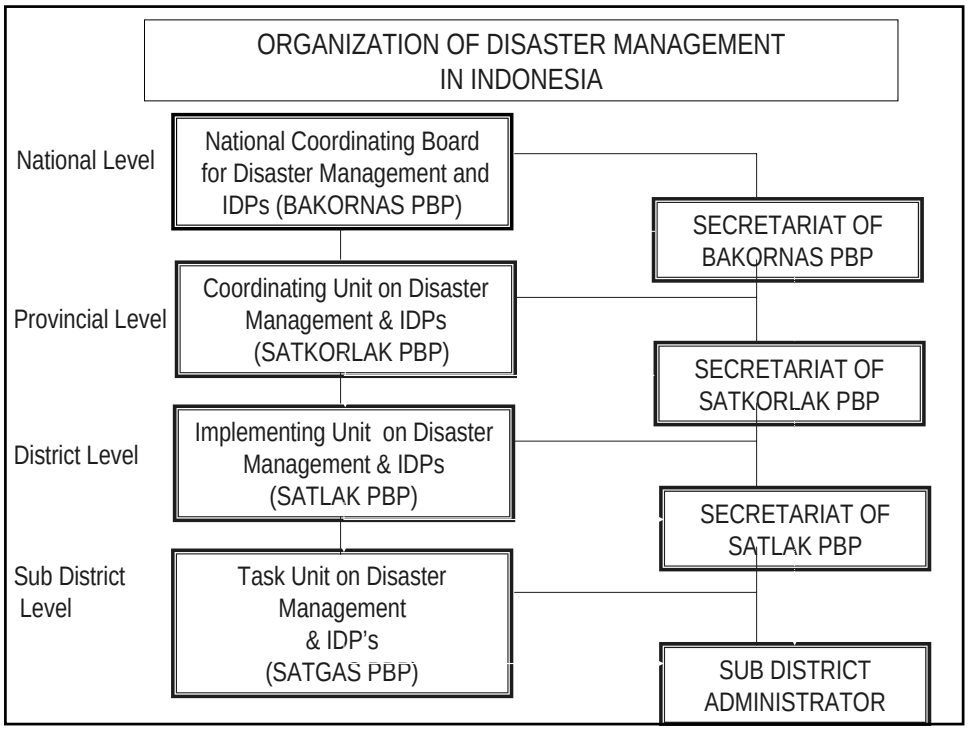
The government policy

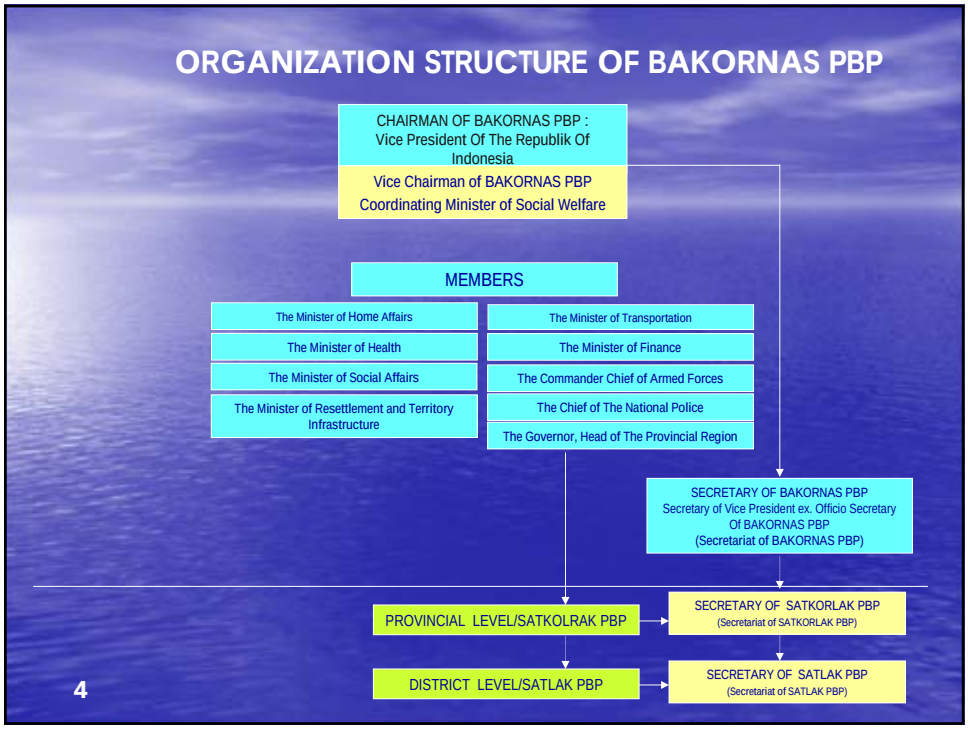
1. Disaster management policy :
   a. focused on preventive & mitigation efforts, also repressive & rehabilitative actions
   b. to evacuate and to handle the disaster victims
   c. to involve stakeholders on disaster management

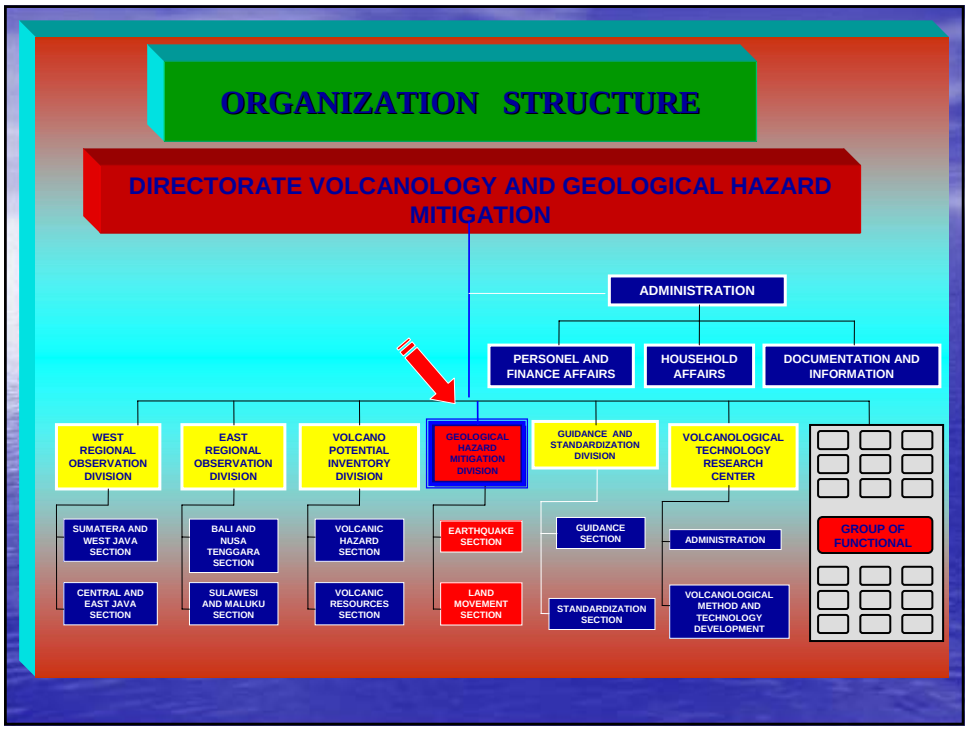
2. IDPs policy :
   a. IDPs repatriation (to their origin place)
   b. the government will give relief assistances for the IDPs (food, tent/ temporary place, basic medical services, water & sanitation)
   c. IDPs handling will be done by coordination

3. Complex emergency policy :
   a. to mobilize all potency & capacity of national & regional to overcome the emergence complex situation
   b. to normalize the condition by provide humanitarian assistances during the emergency situation

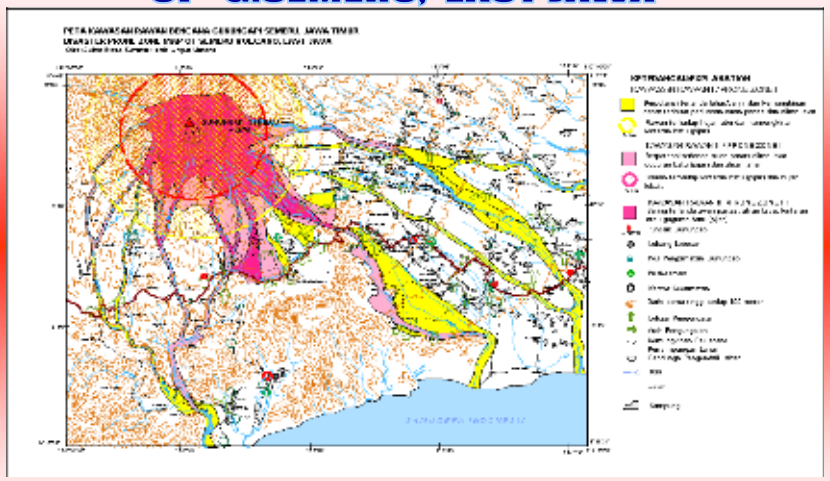
3




ORGANIZATION STRUCTURE OF BAKORNAS PBP
CHAIRMAN OF BAKORNAS PBP : Vice President Of The Republik Of Indonesia
Vice Chairman of BAKORNAS PBP Coordinating Minister of Social Welfare
MEMBERS
The Minister of Home Affairs
The Minister of Health
The Minister of Social Affairs
The Minister of Resettlement and Territory Infrastructure
The Minister of Transportation
The Minister of Finance
The Commander Chief of Armed Forces
The Chief of The National Police
The Governor, Head of The Provincial Region
SECRETARY OF BAKORNAS PBP Secretary of Vice President ex. Officio Secretary Of BAKORNAS PBP (Secretariat of BAKORNAS PBP)
PROVINCIAL LEVEL/SATKOLRAK PBP
SECRETARY OF SATKORLAK PBP (Secretariat of SATKORLAK PBP)
DISTRICT LEVEL/SATLAK PBP
SECRETARY OF SATLAK PBP (Secretariat of SATLAK PBP)
4


ORGANIZATION STRUCTURE
DIRECTORATE VOLCANOLOGY AND GEOLOGICAL HAZARD MITIGATION
ADMINISTRATION
PERSONEL AND FINANCE AFFAIRS
HOUSEHOLD AFFAIRS
DOCUMENTATION AND INFORMATION
WEST REGIONAL OBSERVATION DIVISION
EAST REGIONAL OBSERVATION DIVISION
VOLCANO POTENTIAL INVENTORY DIVISION
GEOLOGICAL HAZARD MITIGATION DIVISION
GUIDANCE AND STANDARDIZATION DIVISION
VOLCANOLOGICAL TECHNOLOGY RESEARCH CENTER
GROUP OF FUNCTIONAL
SUMATERA AND WEST JAVA SECTION
CENTRAL AND EAST JAVA SECTION
BALI AND NUSA TENGGARA SECTION
SULAWESI AND MALUKU SECTION
VOLCANIC HAZARD SECTION
VOLCANIC RESOURCES SECTION
EARTHQUAKE SECTION
LAND MOVEMENT SECTION
GUIDANCE SECTION
STANDARDIZATION SECTION
ADMINISTRATION
VOLCANOLOGICAL METHOD AND TECHNOLOGY DEVELOPMENT

VOLCANIC HAZARD MAP OF G.SEMERU, EAST JAWA



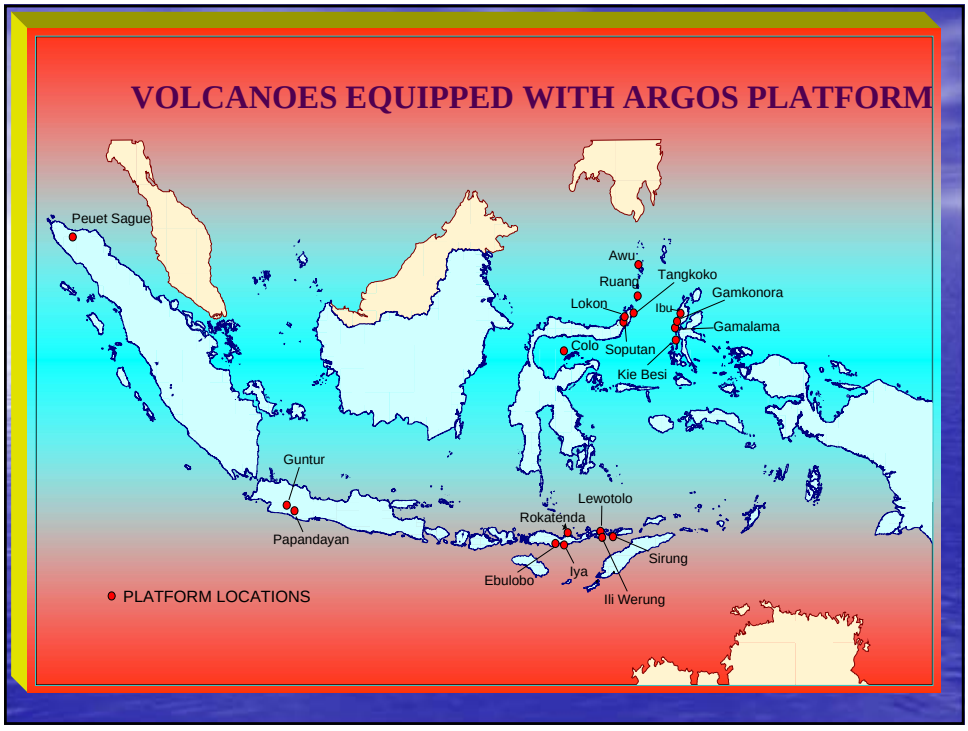
Debris flow, Hot cloud (Zone I)

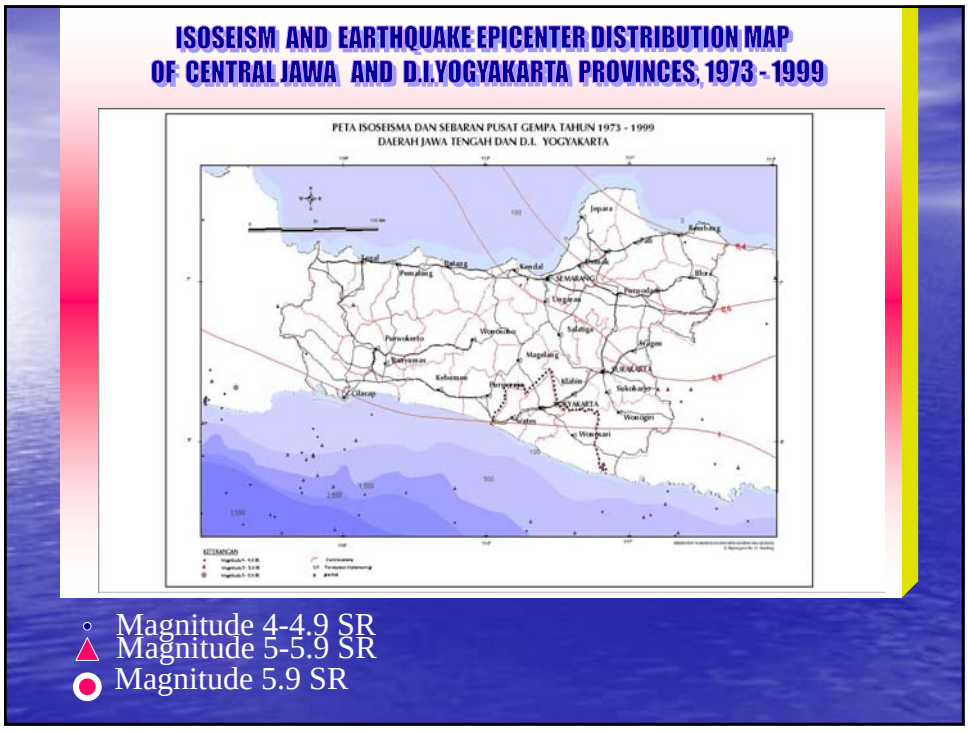
Hot Cloud, Lava flow (Zone II)

Hot cloud, Lava flow, Rock fall (Zone III)

VOLCANIC MONITORING : ARGOS SYSTEM

- TRANSMITION SYSTEM USING SATELLITE
- ABLE TO SEND VOLCANIC DATA (NUMERIC, CONTINOUS, REALTIME, AUTOMATIC)
- ACQUISITION DATA IS DEVELOPED BY CNES, NASA AND NOAA
- USING SATELLITE OF NOAA-TIROS N


VOLCANOES EQUIPPED WITH ARGOS PLATFORM
Peuet Sague
Awu
Tangkoko
Ruang
Gamkonora
Lokon
Ibu
Gamalama
Colo
Soputan
Kie Besi
Guntur
Lewotolo
Rokatenda
Papandayan
Sirung
Ebulobo
Iya
Ili Werung
PLATFORM LOCATIONS


ISOSEISM AND EARTHQUAKE EPICENTER DISTRIBUTION MAP
OF CENTRAL JAWA AND D.I.YOGYAKARTA PROVINCES, 1973 - 1999
PETA ISOSEISMA DAN SEBARAN PUSAT GEMPA TAHUN 1973 - 1999
DAERAH JAWA TENGAH DAN D.I. YOGYAKARTA
Magnitude 4-4.9 SR
Magnitude 5-5.9 SR
Magnitude 5.9 SR

LANDSLIDE

TAKING AN EXAMPLE OF DISASTER REDUCTION

EFFORT AND OBSTACLE OF DISASTER MITIGATION

LANDSLIDE DISASTER

- MOVEMENT OF SLOPE MATERIALS (*SOIL, ROCK, PILE OR MIXTURE AMONG THEM*) TOWARDS DOWN PART BEYOND THE SCOPE.
- THE CAUSE : STEEP SLOPE, SOFT AND THICK SOIL, WEAK ROCKS, SATURATED WATER, EARTHQUAKE, MANMADE.
- WIDELY DISTRIBUTED IN SMALL SCALE.
- MOSTLY HAPPENS IN RAINY SEASON.
- 1940 – 2000 : LANDSLIDE AT MORE THAN 800 LOCATIONS KILLING 860 PEOPLES.

THE NUMBER OF HUMAN VICTIM AND HOUSE DAMAGE DUE TO LANDSLIDES IN INDONESIA - 2001

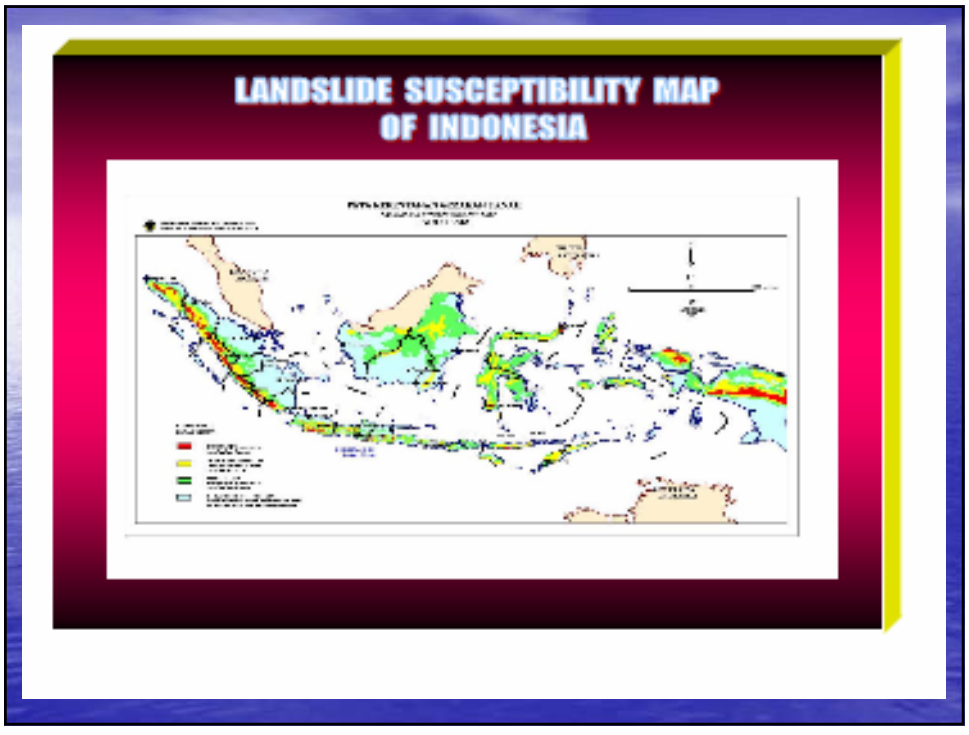
Province	Number of Event	Number of Victim	House Damage
West Java	33	132	298
Central Java + Yogyakarta	10	18	87
North Sumatera	1	231	146
West Sumatera	1	5	2

MITIGATION FOR LANDSLIDE DISASTER

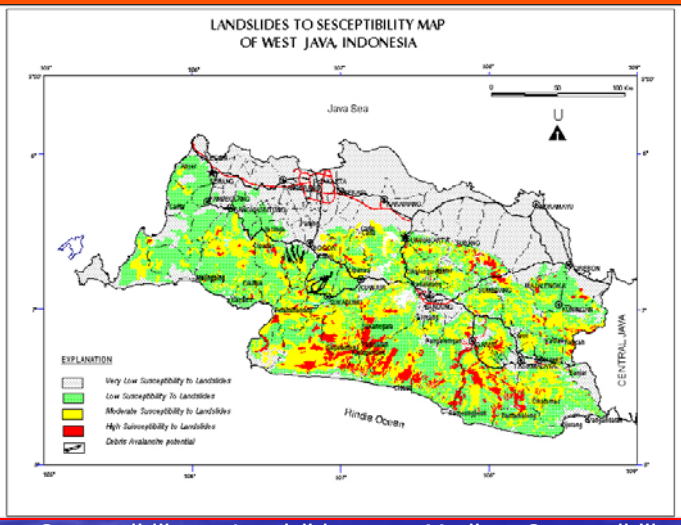
- **PRE-LANDSLIDE EVENT :**
  - LANDSLIDE HAZARD ZONATION MAPPING
  - LANDSLIDE MONITORING
  - ALERT FACING LANDSLIDE DISASTER
  - BUILDING THE S.O.P.
  - PUBLIC EDUCATION
- **POST-LANDSLIDE EVENT :**
  - QUICK RESPONSE TEAM DO AN EMERGENCY RESPONSE
  - REHABILITATION, NORMALIZATION, AND RECONSTRUCTION

ZONING ; LANDSLIDE SUSCEPTIBILITY MAP

- High susceptibility to landslide ; landslide are still active
- Medium susceptibility to landslide ; landslide may occur
- Low susceptibility to landslide ; landslide are rare or small scale
- very low susceptibility to landslide ; Landslide are very rare or none



LANDSLIDE SUSCEPTIBILITY MAP OF WEST JAWA, INDONESIA



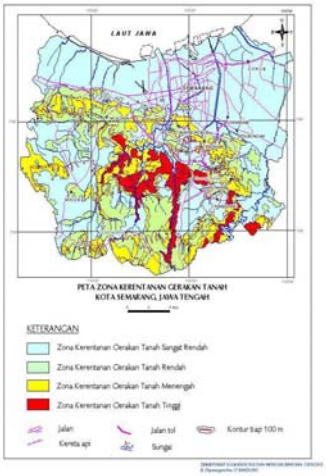
Very Low Susceptibility to Landslide

Medium Susceptibility to Landslide

Low Susceptiibility to Landslide

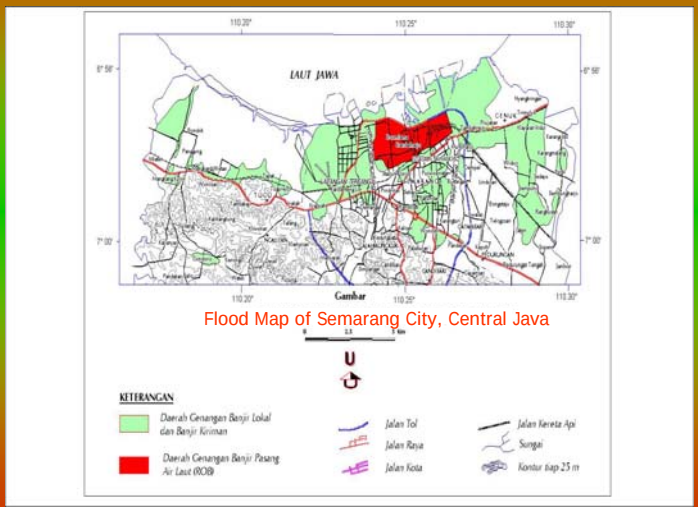
High Susceptibility to Landslide

LANDSLIDE SUSCEPTIBILITY MAP OF SEMARANG, CENTRAL JAWA



Tens houses in real estate area heavily broken after 2 years constructed

FLOOD MAP OF SEMARANG, CENTRAL JAWA



Flood Map of Semarang City, Central Java

Inundated Area

Affected by raise of sea water level

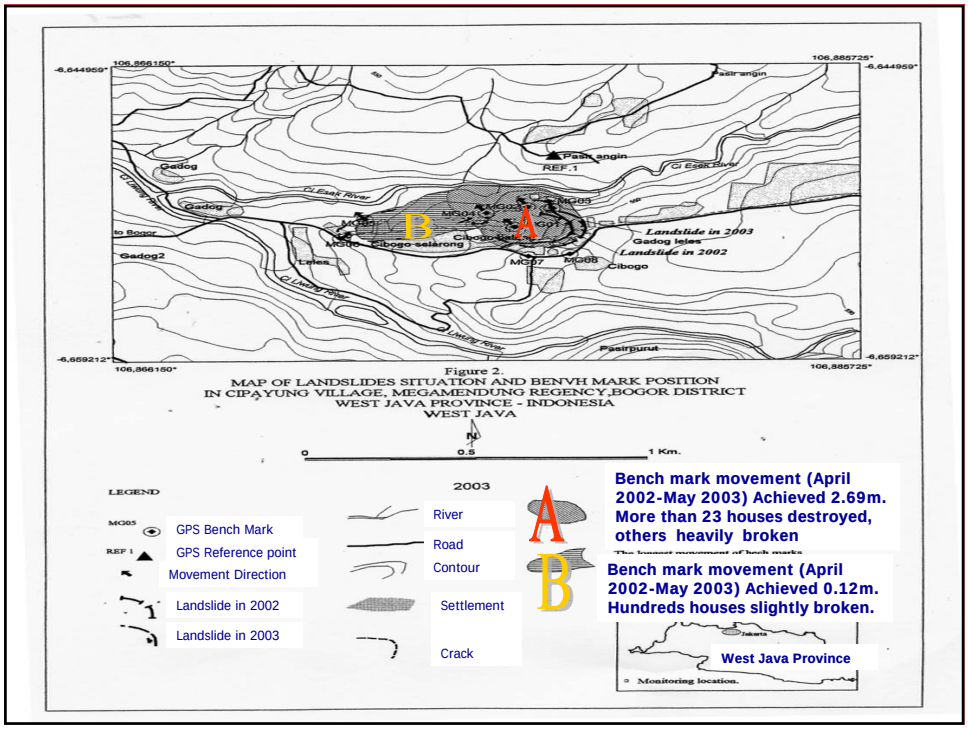
MONITORING:

Conducted in active landslide area.

To know the displacement and length of displacement.

By Measuring position changes of benchmarks constructed in landslide area.

Measurement using Global Positioning System (GPS)



Main Problem :

. Complexity (varieties) of geological condition.

. Big population but Mostly people or local government has a little knowledge or awareness of disaster.

. Environmental damage in some places due to area development.

- Lack of data (information) due to lack of research.

. Others (self interest, circumstance, budget etc can hamper disaster reduction).

DISASTER SITUATIONS

- Disaster Threat (1)
  - Indonesia is situated in geographically between Asia and Australia continents, the Indian and Pasific Oceans
  - It is located in the active tectonic zone and composed of parts of three crustal plates (Eurasian plate in the north, Indian-Australian plate in the south, and Pasific Ocean floor plate in the northeast)
  - Situated in the three regional mountain systems (Alpine Sunda, Circum Pasific and Circum Australian)

8