



The Roles of University in Disaster Preparedness and Management

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Disasters in Indonesia

NATURAL

- Earthquakes
- Flood
- Land Slide
- Volcanic eruptions
- Tsunami
- Tropical storm & tornadoes
- Major epidemic diseases

“MAN MADE”

- Terrorist attacks
- Railroad Accidents
- Aircraft Crashes
- Sport disasters
- Fires
- Shipwrecks

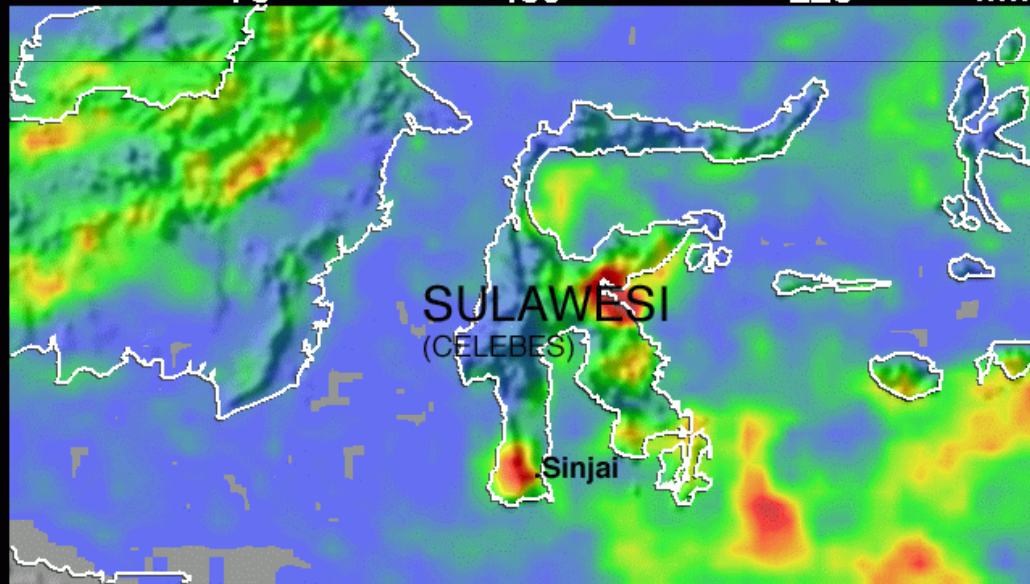
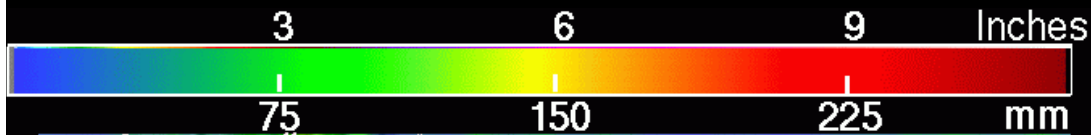
Disaster in Indonesia

- Earth quake (Yogyakarta)



Disaster in Indonesia

● Flood



June 14-21, 2006









Disaster in Indonesia

● Volcano

Merapi



Bromo

Disaster in Indonesia

- Tsunami (Aceh)



Disaster in Indonesia

- Bali bomb



Disaster in Indonesia

- Avian Flue



GENERAL SITUATION

3



- World largest archipelago: area 1,919,440 km²
- Over 18,000 Islands, more than 500 languages and dialects
- 4th largest populated country: 234 million people in 33 provinces
- 3 time zones with flying time of 9 hrs from west to east

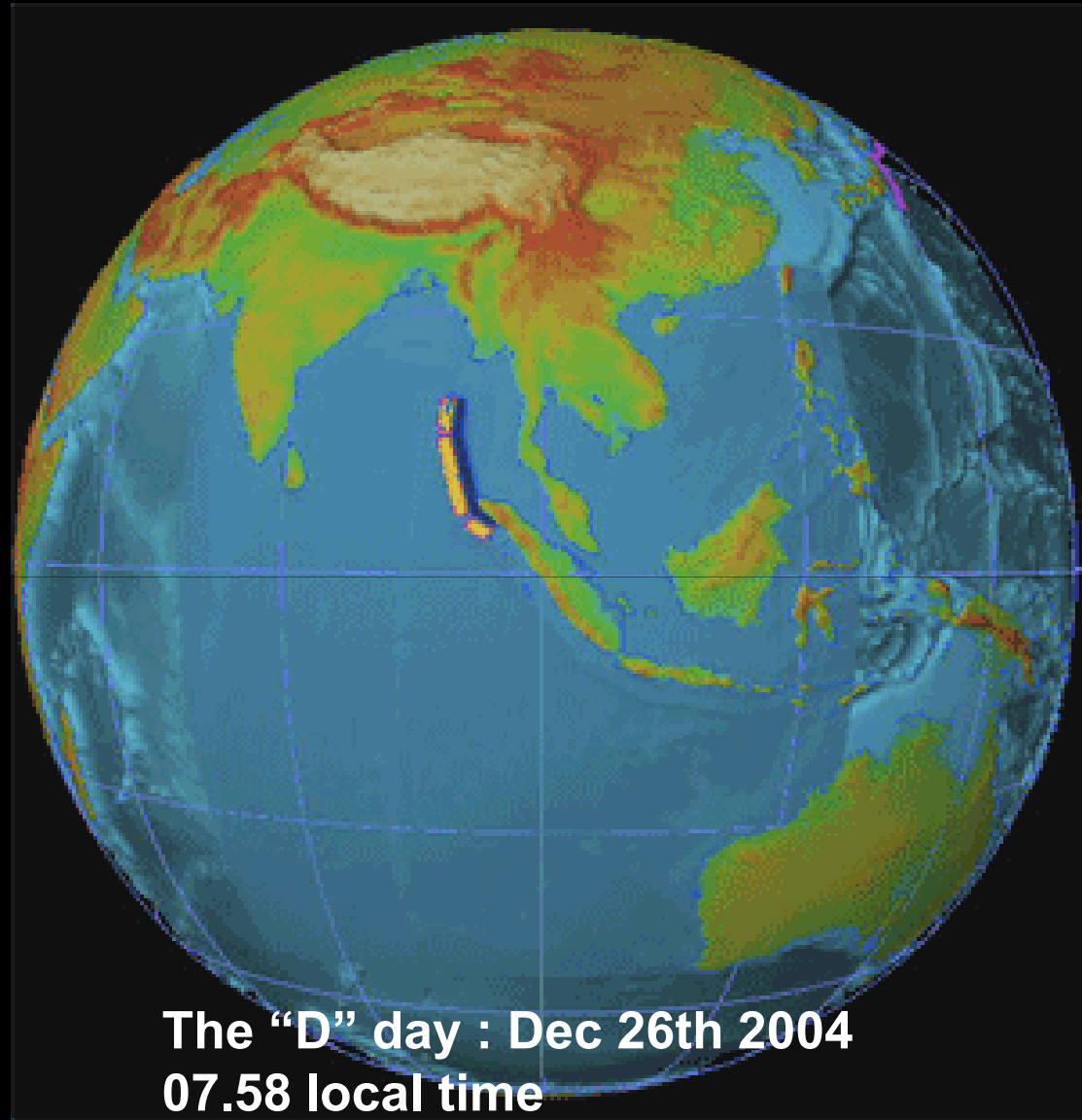
**A country know as the land of paradise
with spices, sea, floras and volcanoes**



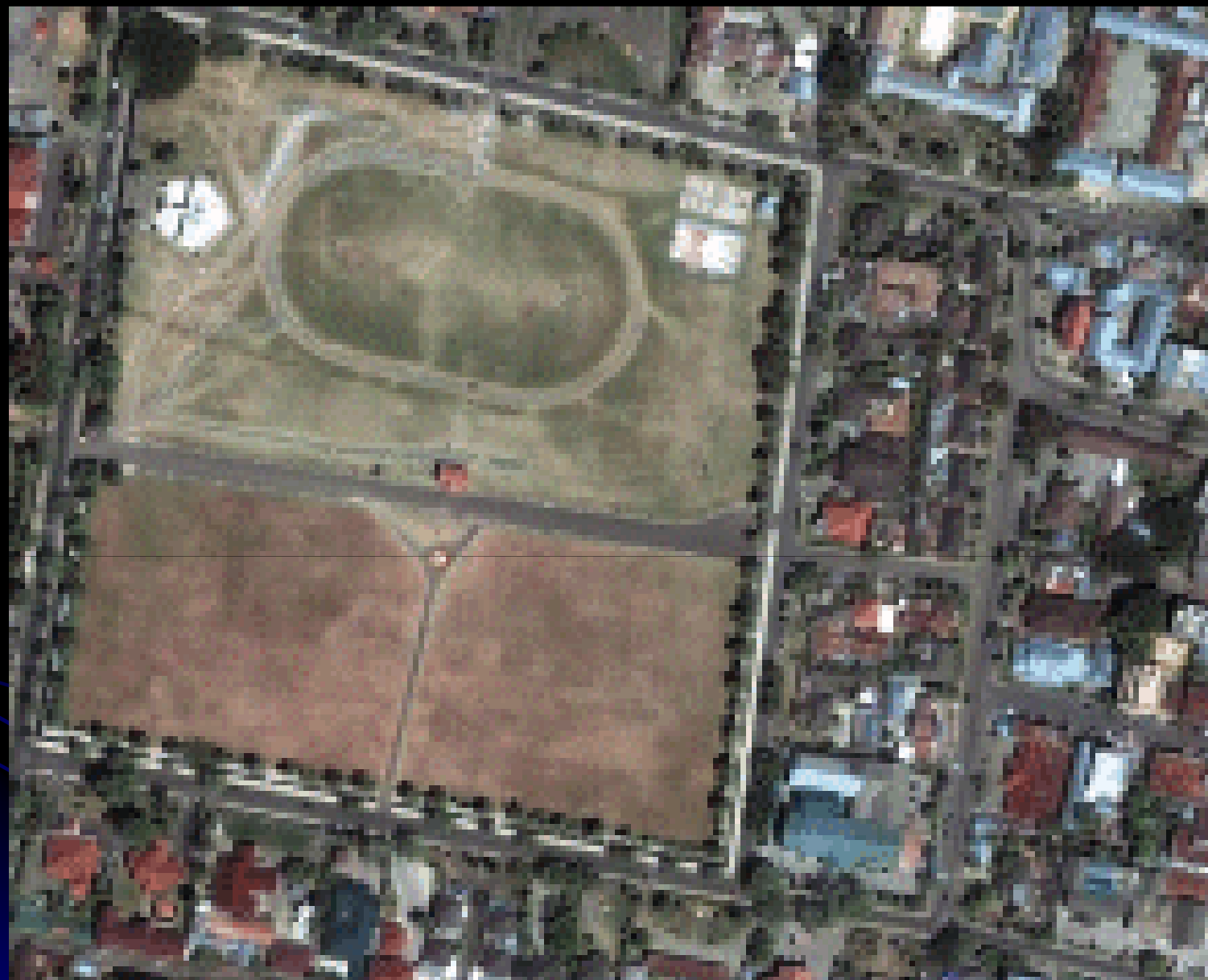
When affected by the earthquakes and tsunami...



On December 26, 2004, earthquake and tsunami devastated the lives of million of people, leaving a wake of destruction from Asia to Africa.



**The “D” day : Dec 26th 2004
07.58 local time
9,3 Richter scale**



Global
Security.org



Public
Eye

DIGITALGLOBE

What is our impression

- **Aceh is almost totally destroyed as seen by the scale of destruction and casualties**
- **Losses were seen any where, roads full of rubbish, buildings where damage**
- **The yelling of help of the surviving, frighten, hungry and thirsty victims**
- **No electricity**
- **No food**
- **No clean water**
- **And it seems NO HOPE**

TSUNAMI IMPACT

- **KILLED LOTS OF PEOPLE INCLUDING DOCTOR, NURSES & THEIR FAMILIES**
- **DAMAGED PUBLIC SERVICES INCLUDING ALL HOSPITAL SERVICES IN PROVINCIAL CAPITAL**
- **DISRUPTED THE :**
 - ✓ **COMMUNICATION / TELEPHONE LINE**
 - ✓ **TRANSPORTATION**
 - ✓ **CLEAN WATER SUPPLY**
 - ✓ **ELECTRICITY**
 - ✓ **LOGISTICS SYSTEM INCLUDING DRUGS & MEDICAL SUPPLIES**



The Health Impact

- Deaths 128,703 people
- Missing people 93,088 people
- Including Health personnel
 - Dead 250 persons
 - Missing 441 persons
 - Total 691



Health infrastructure

- 53 of 244 health facilities incapacitated
- Severe damage to:
 - Provincial General Hospital
 - Provincial Health Office
 - Provincial Public Health Laboratory
 - District Hospitals
 - District Health Offices
 - Health Centers and Health Posts



Social Impact

**LOSS OF
LOVED ONES,
HOME, FACILITIES
BELONGINGS,
EARNINGS,
WORK, ETC**

**MENTAL AND
PHYSICAL
TRAUMA**

**LOSS
OF
HOPE**

**AFFECT
SOCIAL,
ECONOMY,
CULTURE,
RELIGION AND
TRADITIONS**

**NO SOCIAL
ACTIVITIES SEEN AND
HIGH ABSENTEEISM
FOR TWO MONTHS**



Economic Loss

In-terms of facilities

In-terms of cash

In-terms of manpower

In-terms of heritage

In-terms of potential business growth

In-terms of social, culture and traditional values

In-terms of national resources

**ESTIMATED TOTAL LOSS
FOR ALL SECTORS :
10 BILLION US\$**



Tsunami morbidity

- Trauma & wounds (39 %)
- Respiratory disease / lung injury (31 %)
- Diarrhea (7 %)
- Background health problems (22 %)
- Others

80 % → wound debridement + dressing

Casualty patterns ~ other Tsunamies
Different significantly w/ earthquakes



Infection



Fractures & Amputation







ACTION

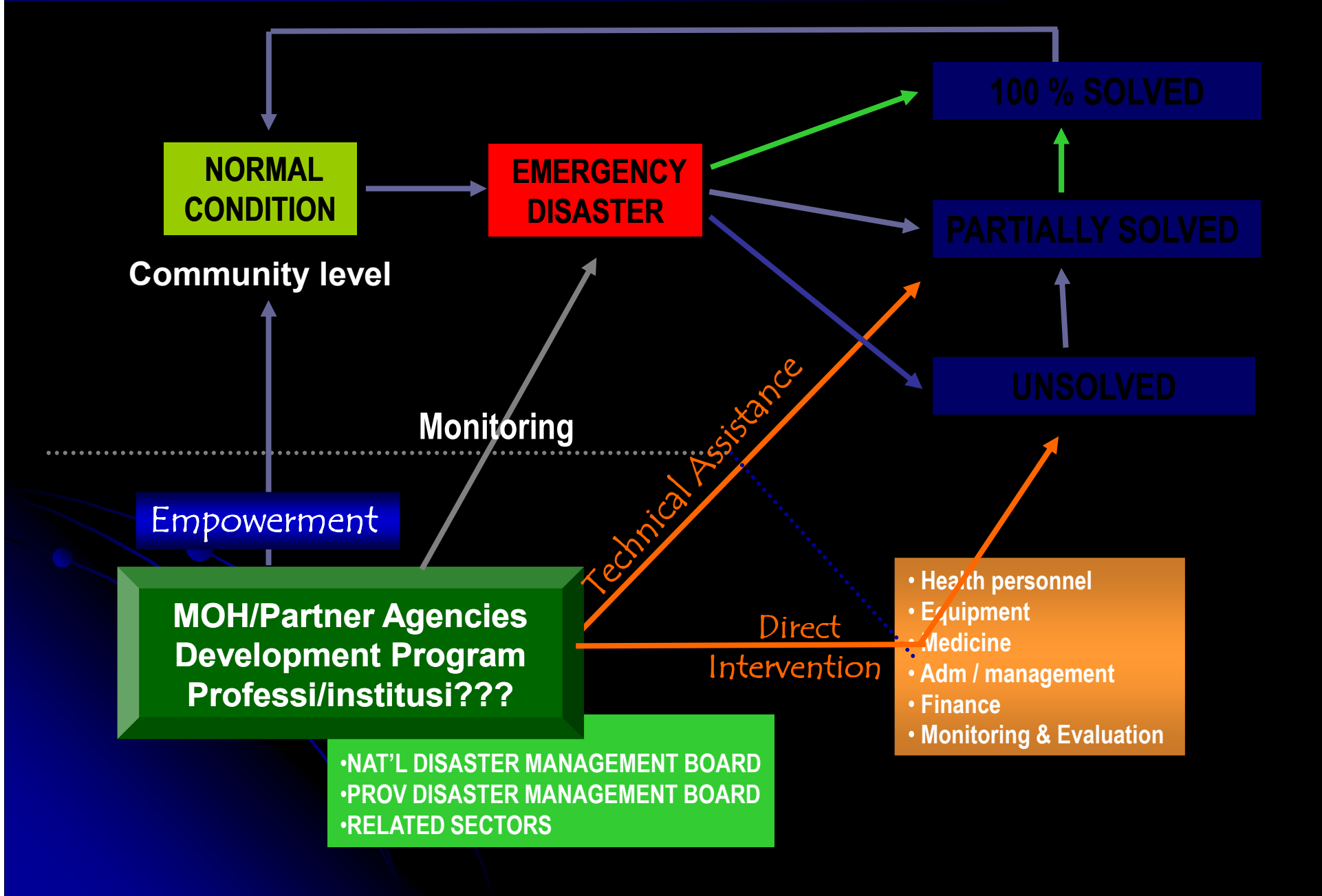




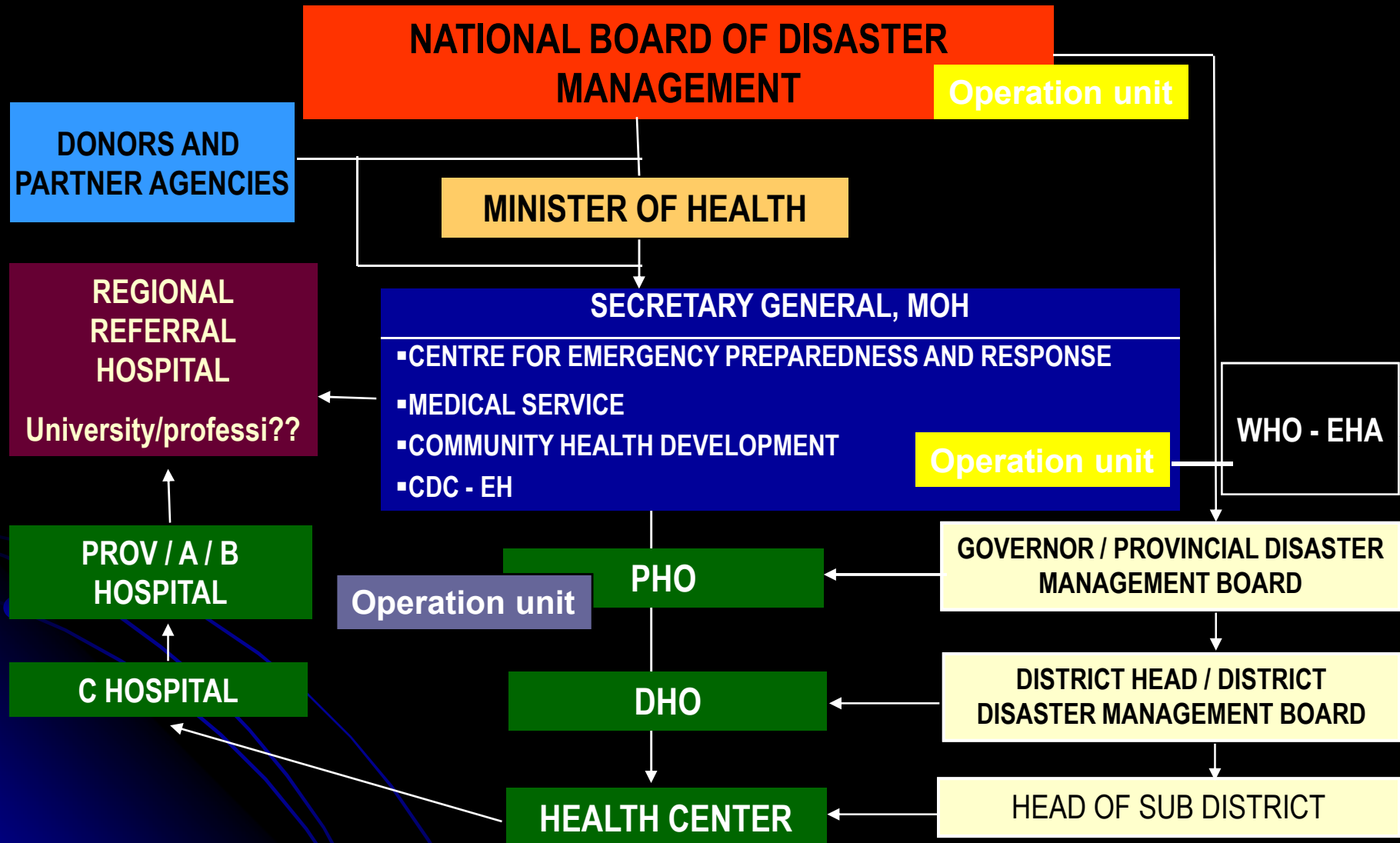
EMERGENCY RESPONSE ACTIVITIES

- Coordination meeting
- Political decision → open sky policy
- Resource mobilization (nat'l & intnat'l)
- Advance team → rapid health assessment
- Emergency medical & food supply
- Medical services (medical evacuation, health post , field hospital etc ,)
- Outbreak prevention (immunization, water & sanitation , vector control, surveillance)
- Nutrition & mch services
- Psychosocial assessment

PRINCIPLE OF HEALTH ASSISTANCE IN DISASTER



Disaster Management Organization



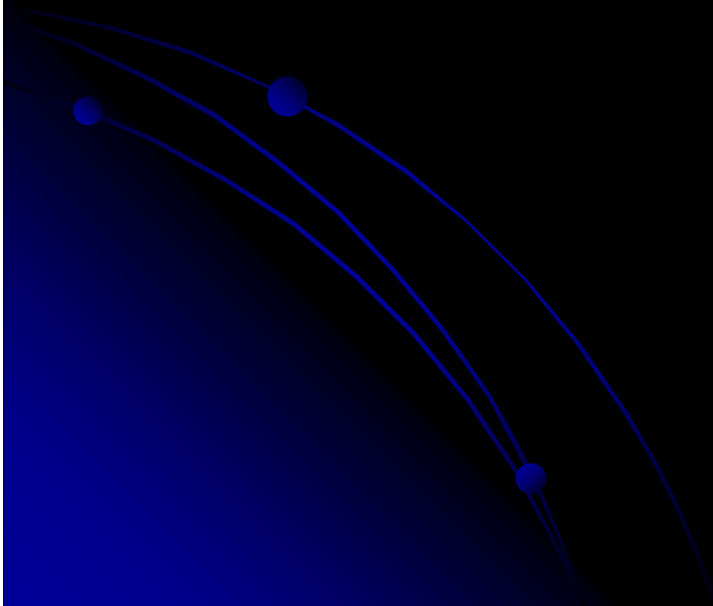
What lesson can be learned

- This was the worst natural disaster in Indonesia's history
- Over 200.000 people lost their lives, more than 1.000.000 people were displaced and orphaned
- Thousands km of land, roads, bridges, airports, were damaged. The scale of damages were unpredicted
- It might be worsen than atomic bom in Hiroshima
- We need years to rehabilitate the damages

What lesson can be learned

- **Tsunami disaster in Aceh has shown the facts that multi-nationality both civil and military have worked hand in hand, regardless of differences in ethnic, race, religious, countries and hierarchy.**
- **The disaster has reminded us to the basic human similarity, basic human needs, the human right**
- **The disaster has brought us to a new insight regarding the human existence in this planet**

University roles?



Why the role of Universities are important ?

- **Human resources– can mobilize staff and students.**
- **Experts/scientists – Scientist to do studies. Expert in farming, fishery, geology, city planning etc.**
- **Laboratory**
- **Appropriate body / LPPM**



Principles to be observed

- Focus in empowerment
- Sustainable
- In Accordance with local culture and condition



Research

- **University strength**
 - **Expertise**
 - **Laboratories**
 - **Man power**
 - **Networks**



Emergency preparedness

● Research

● Various Study Program

- Architect
 - Civil engineering
 - Medicine
 - Geology
 - Forestry
 - Social sciences
 - Psychology
 - etc
- 

Emergency preparedness

- **Preparation of SOP**
 - **Multidisciplinary approach**
 - **Emergency management in the university**
 - **Need to be developed in Indonesia**
 - **Learn from more advanced Universities**

Emergency management

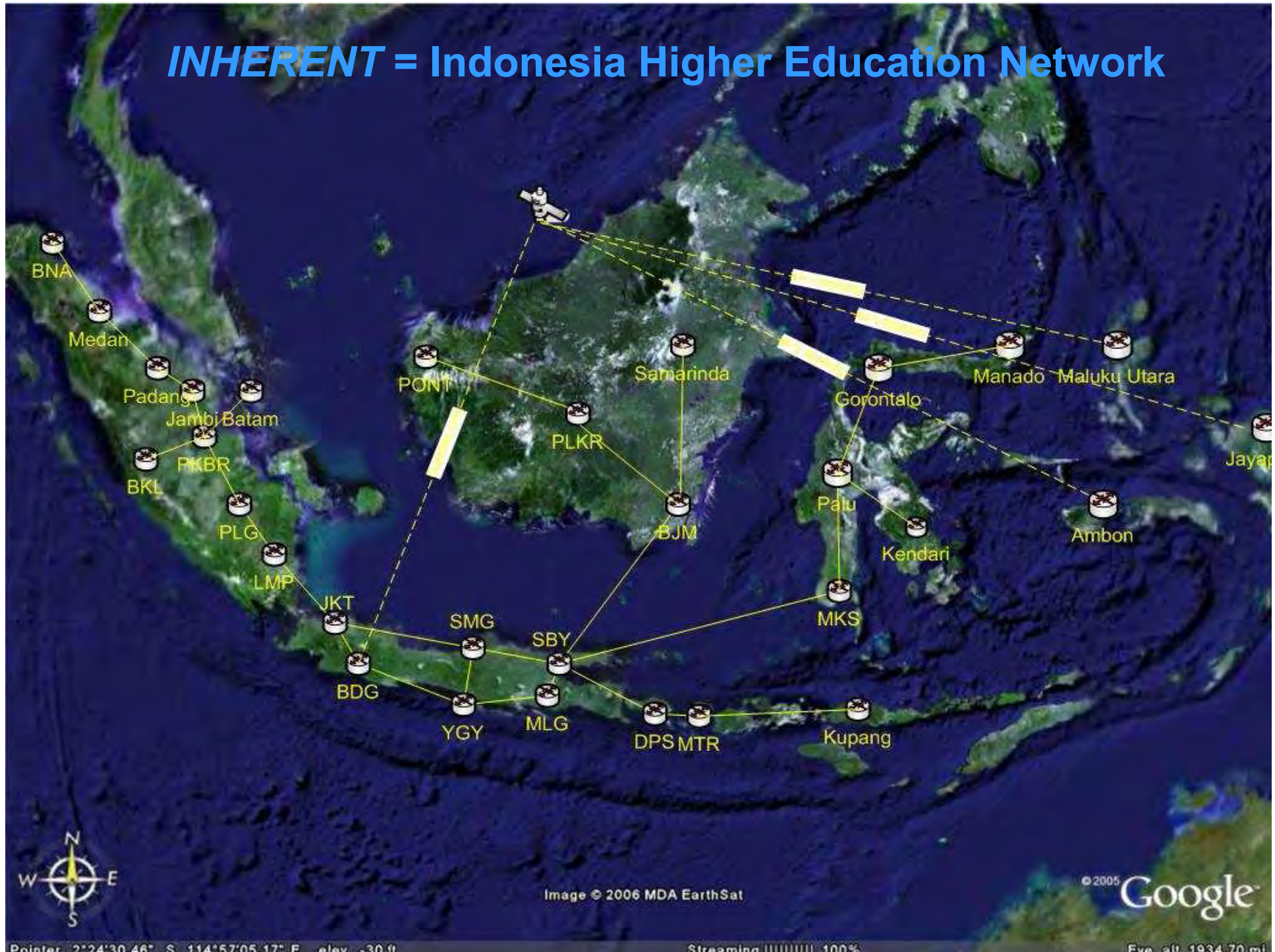
- **Professionalism**

- Degree course in Disaster Management
- Post graduate training

- **Distance learning**

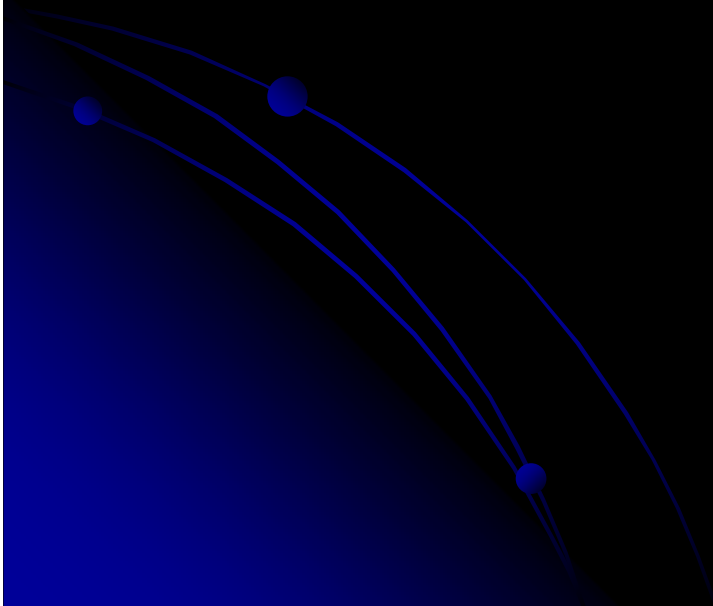
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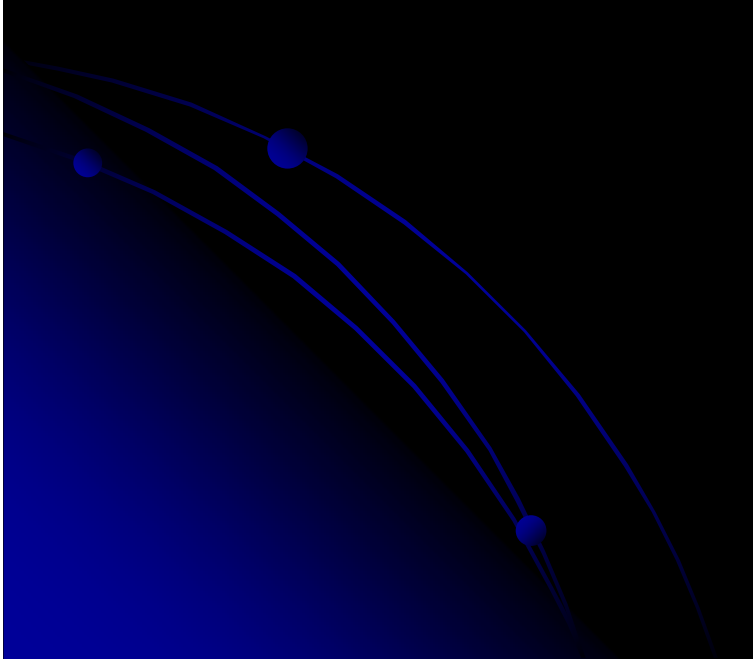
Emergency management

- **University support in disaster**
 - **Nasional**
 - **International**











BEDAH





POLIKLINIK

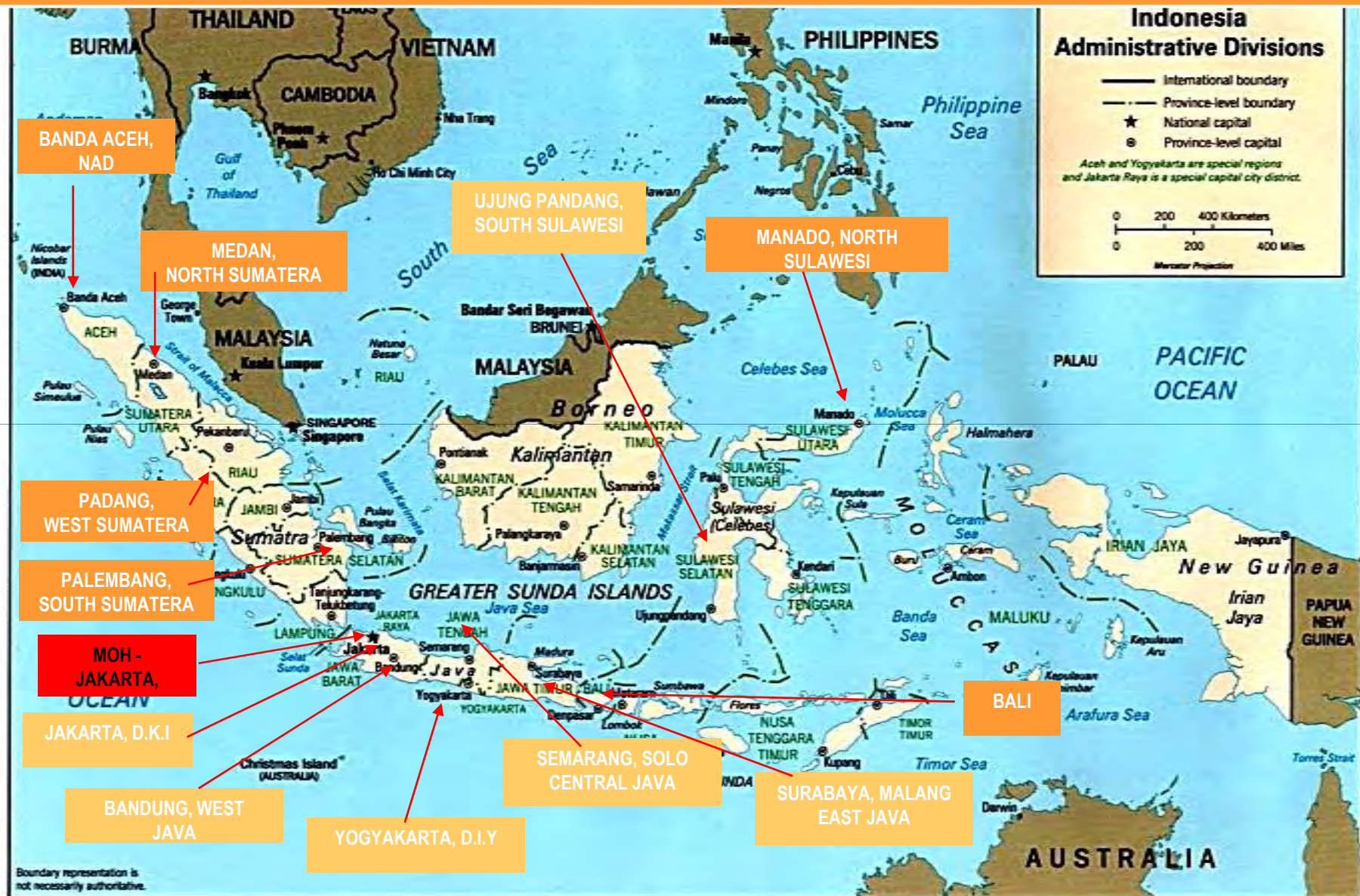
Rekreasi





EMERGENCY PREPAREDNESS AND RESPONSE HUBS IN INDONESIA

13 Hubs in total. 1 in central MoH, 6 in regional, and 6 in Provincial levels



Emergency health information



Early warning system



**HEALTH EMERGENCY
INFORMATION & OPERATION SUPPORT UNIT**
MoH, REPUBLIC of INDONESIA
Supported by WHO

Monitoring & Evaluation



Coordination and operational support















Conclusion

- University has a great potency to take part in emergency preparedness and management
- Various areas of research, teaching and community services in emergency management are waiting for our touch
- Universities in Indonesia should take advantage of the presence of *INHERENT*

NATURE OF DISASTERS

Disasters may occur to :

- **ANY WHERE**
- **ANY TIME**
- **ANY ONE**

Well prepared is very important

**Do something before other people do
something for you**

THANK YOU VERY MUCH

THANK YOU

