

Determination of Hazard from National Level

AN EXPERIENCE FROM PADANG


PADANG



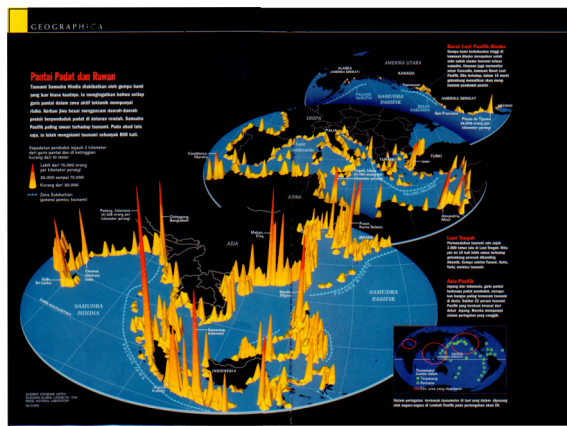
Padang with approximately one million citizens is one of the most prawn areas in the world and threatened by possible coming big Earthquakes and Tsunami. It is located just in front of Indian Ocean and relatively close to active convergent margin between Asia and Indo-Australia plates. Many scientists, EQ and Tsunami experts predicted that most possibly Padang will be hit by EQ and Tsunami.

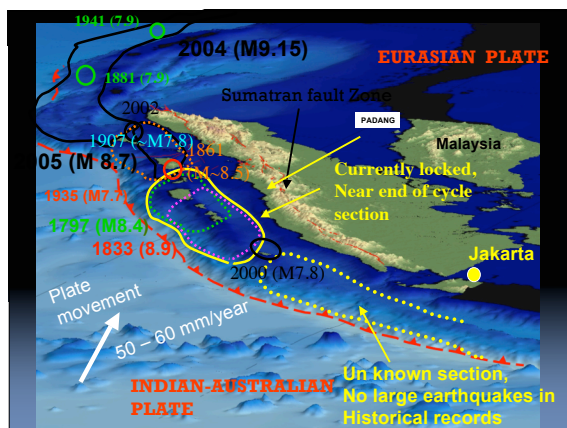
GENERAL INFORMATION

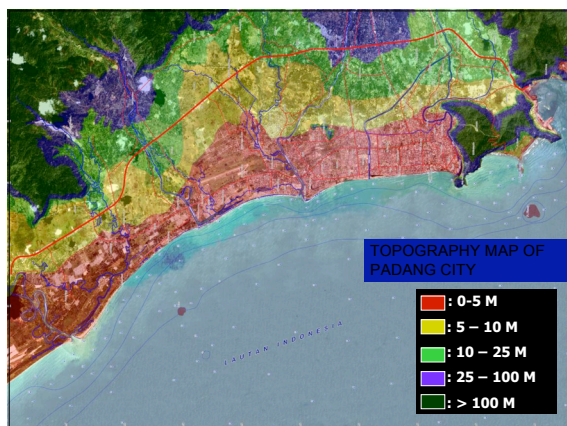
Padang is a capital of West Sumatera Province. Almost 1 million people live in the City. Geographically, it lays on the west coast of Sumatra Island and has a direct border with the open sea (Indian Ocean)



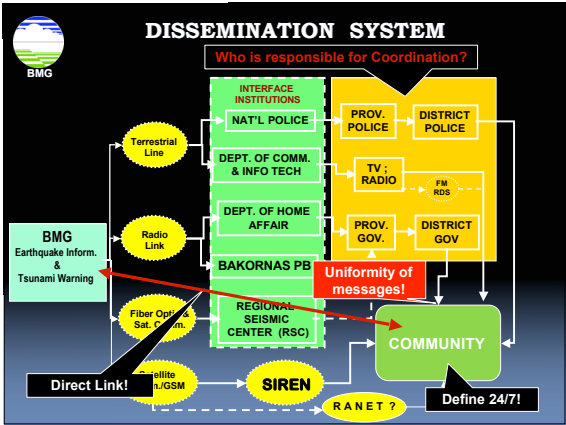
Picture by Google Earth

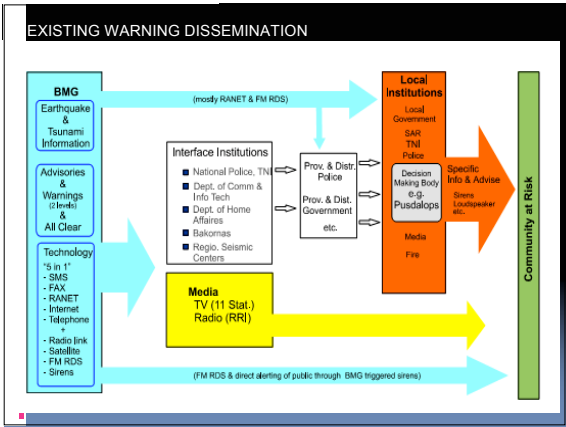






WARNING DISSEMINATION

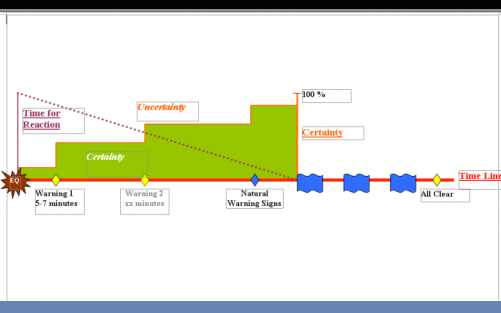




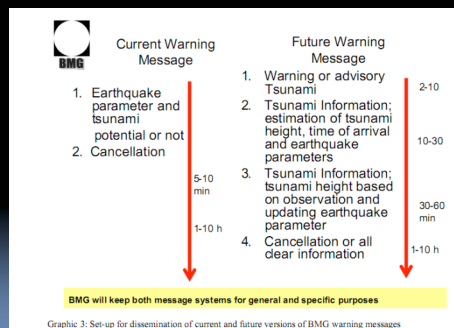
Alerting the Public – How?

- The key is to **educate and communicate a warning message** to people on the coast to move inland to higher ground to escape the destructive waves. Also consider vertical evacuation in reinforced concrete buildings.
- All organizations need to develop **Standard Operating Procedures and multiple communication methods** for alerting the public, using high and low technology such from satellite broadcasts to mosques loudspeakers to communicate the alert.
- Special Case: **Local Tsunami. First Line of Defense** - Public awareness and education will save people near earthquake epicenter.

TIME LINE



WARNING MESSAGE



How does the Local Government react on the Warnings ? (1)

- Disseminate the warning to the local communities via local channels: RAPI, FM Broadcast, Mobile Speakers, SMS
- Local Leaders gather at the RRI (Govt. Radio Station) relayed by private stations
 - Information to the Public
 - Coordination
 - Reporting (damage and victim)
 - Distribution of First Aid
 - Decision for Evacuation
 - Etc
- Institutions related to the DM are stand by in alert condition and following their own SOP

How does the Local Government react on the Warnings ? (2)

- “Push Button” action to activate siren system, will be taken only as the last defense by the Governor (or mandated institution) at the Provincial Level and by Mayor or Bupati at District level on the Worst Case Event.
- In the near future an SOP regarding the Warning Chain and Dissemination will be developed

WORST CASE SCENARIO

•As agreed in the Padang Consultative Group (Scientist meet Politicians) , theoretically :

Temporary” Worst Case: Scenario 3 (Mw 9.3, slip 20 m) as described in Borrero et al “Tsunami Inundation modeling for western Sumatra”, 2006

WHEN DO THE PEOPLE HAVE TO EVACUATE ?

- Activation of Tsunami Warning Siren
- See and Feel the Natural Signs (no need to wait for Siren) :
 - EQ Events : > 1 minutes – Heavy and Big Shakes
 - Collapse Buildings
 - Ebb Tide of Sea Water

Summary

- Unwritten common understanding: EQ occurred → listen to the FM Broadcast Radio
- People of Padang has learned a lot from experience how to react on EQ events. "Intuition" and "Sense" are the basics.
- Public and Govt. awareness are already developed.
- So far, there is no SOP yet for Warning Dissemination. Further coordination and common SOP for Tsunami Warning is needed
- The Next generation of Warning Message from BMG will be very important for decision making

THANK YOU