

DISASTER MITIGATION AND PREVENTION OF PHUKET

By:

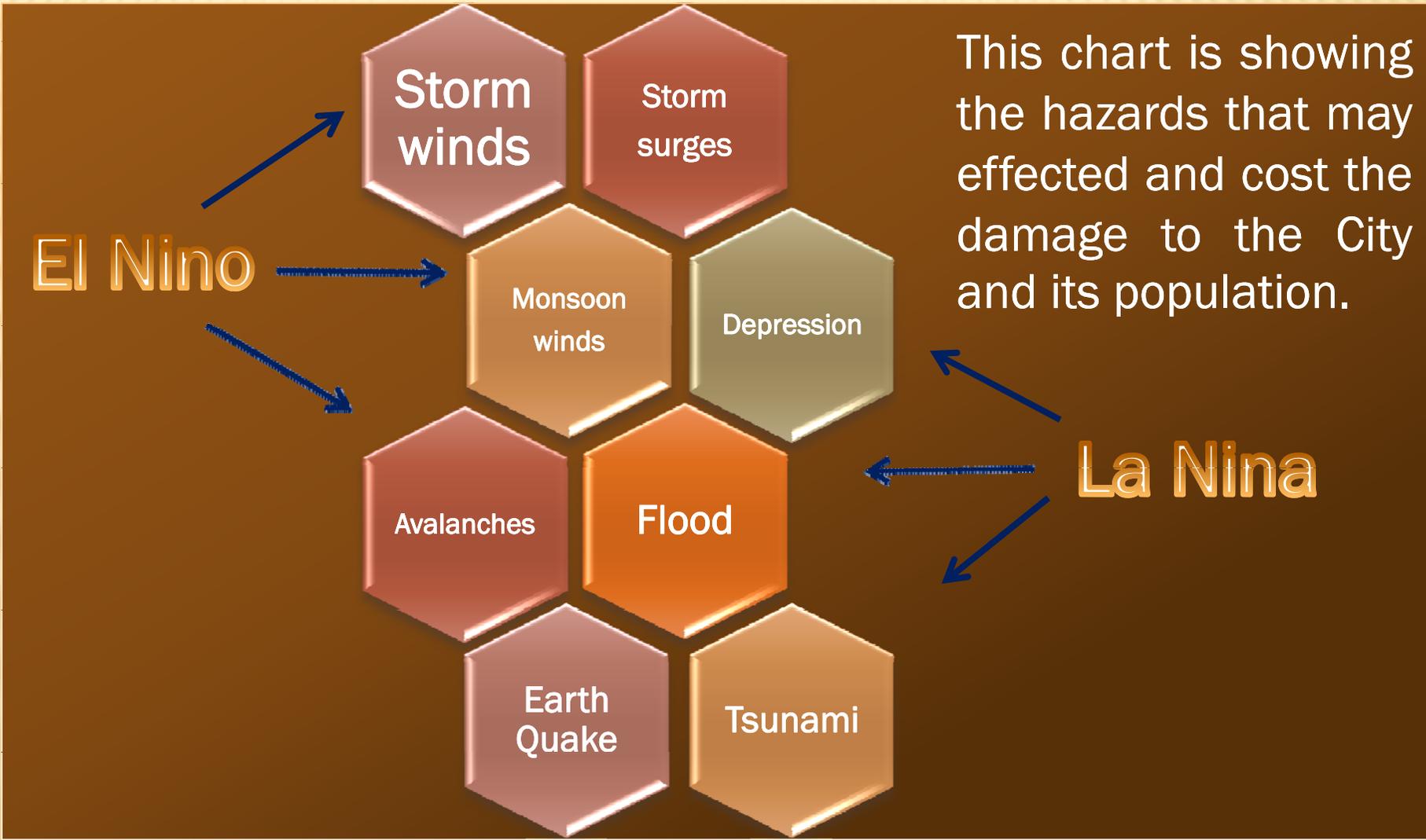
Bhuritt Maswongssa

President

Tourism Council of Phuket

6 Nov 2012 (updated 19 Feb 2016)

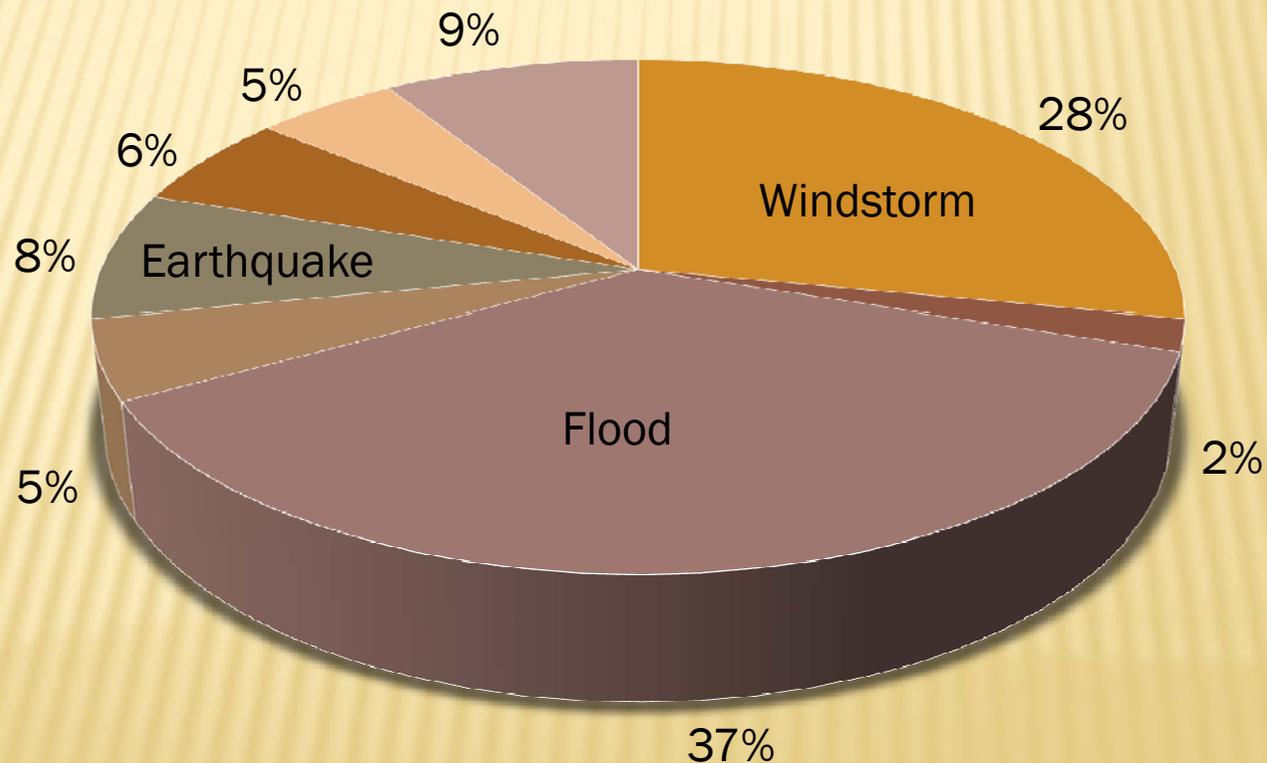
RELATED HAZARDS



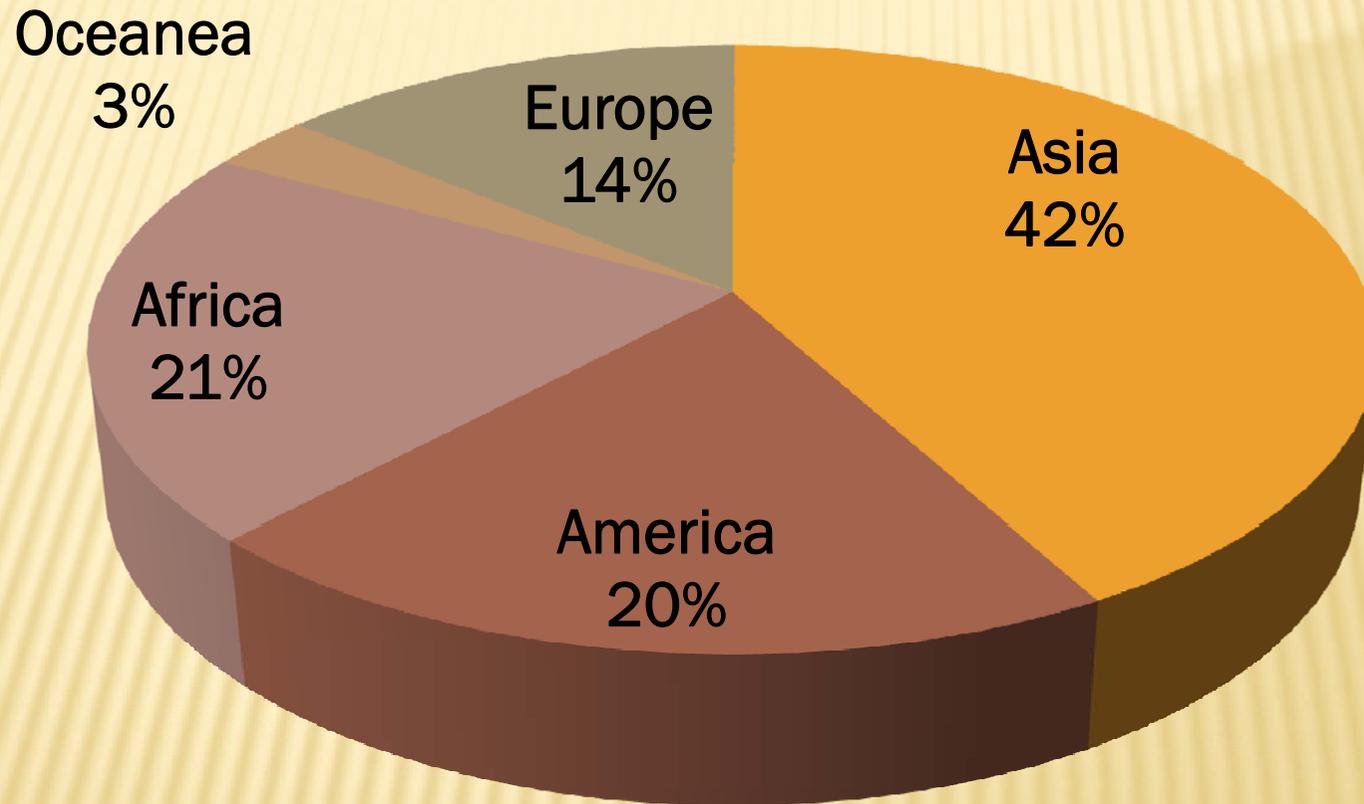
This chart is showing the hazards that may be affected and cost the damage to the City and its population.

GLOBAL DISTRIBUTIONS OF THE NATURAL HAZARDS SINCE 1993 - 2002

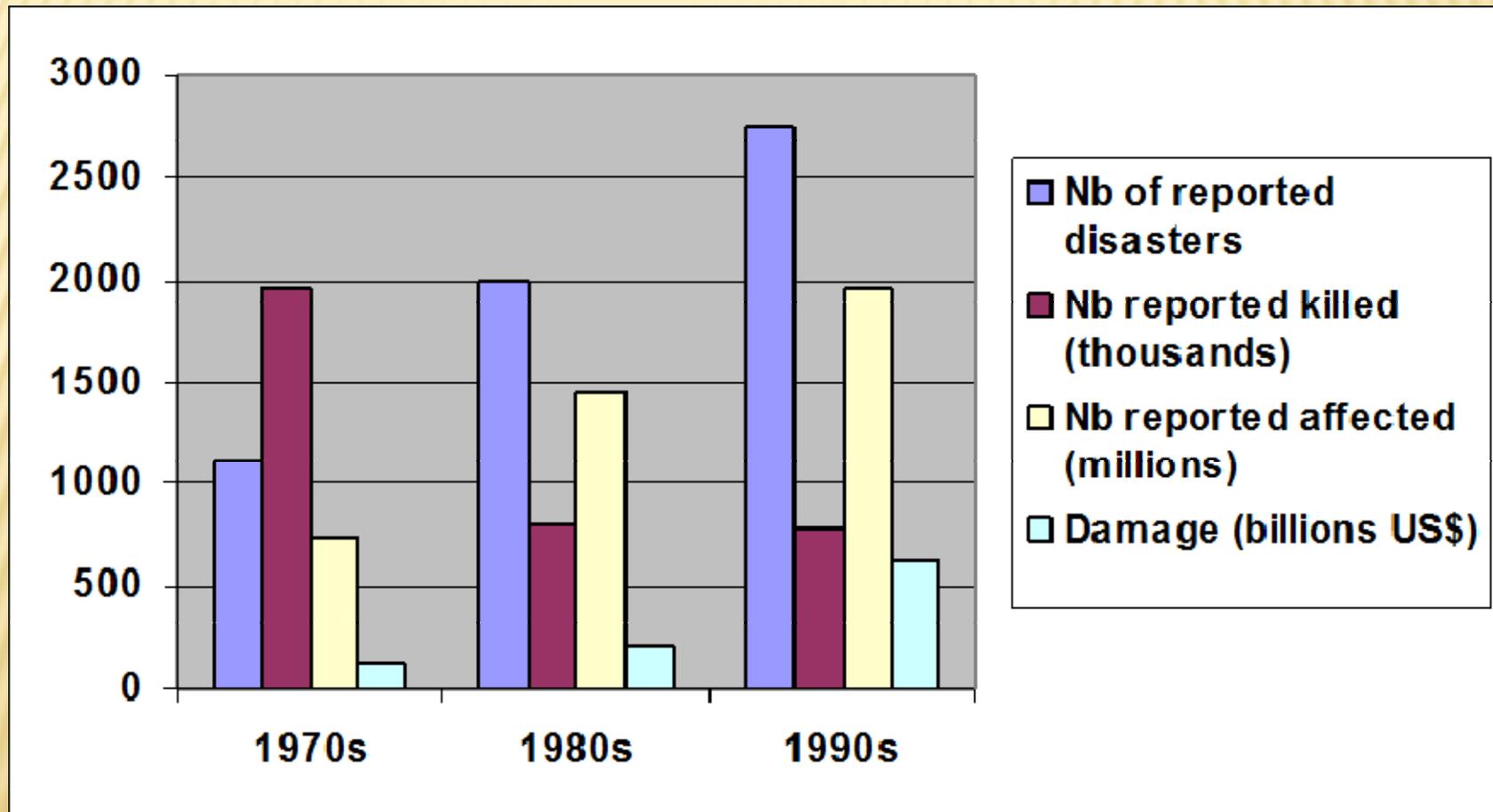
- Windstorm
- Florest/Scrub fires
- Extreme temperature
- Volcanics eruptions
- Earth quakes
- Droughts and famines
- Floods
- Avalanches and landslides



REGIONAL DISTRIBUTIONS OF DISASTER 1993 - 2001



EVOLUTION OF NATURAL DISASTERS AND THEIR IMPACTS



DISASTER PREVENTION AND MITIGATION COMMAND

National Command

Disaster Prevention and Mitigation of Thailand / Prime Minister



Provincial Command

Phuket Province / Governor of Phuket



District Command

Chief of District and Local Authority

Chief of village and community

DISASTER PREVENTION AND MITIGATION COMMAND



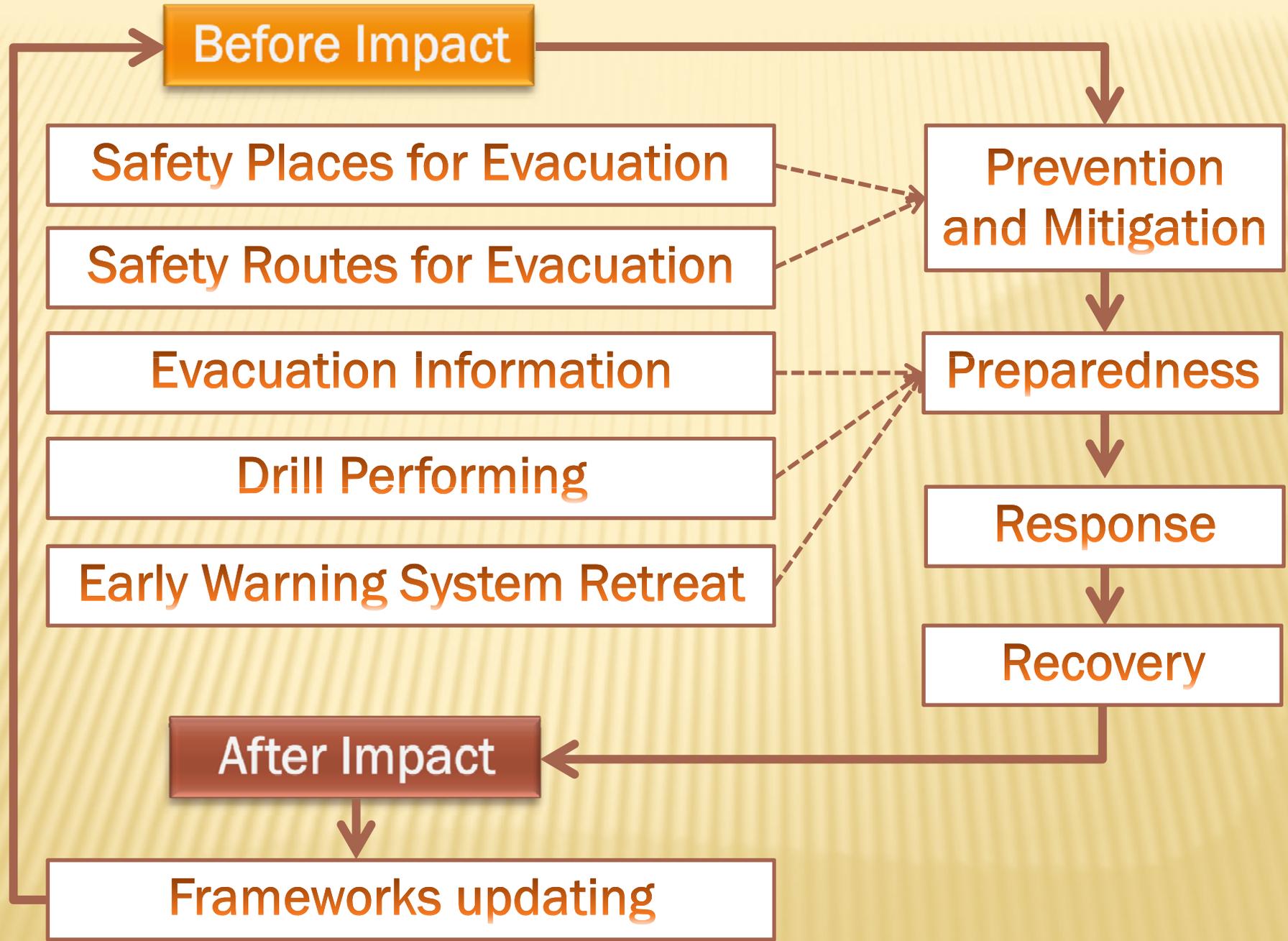
PHUKET DISASTER MANAGEMENT FRAMEWORKS



BEFORE DISASTER SITUATION

✦ Frameworks:

1. Safety places for evacuation planning.
2. Safety routes of evacuation planning .
3. Evacuation information implementing.
4. Drill performing.
5. Monitoring.
6. Early warning system retreat.
7. Frameworks updating.



SAFETY ROUTE AND SHELTER PLACE PLOTTING



Evacuation shelter

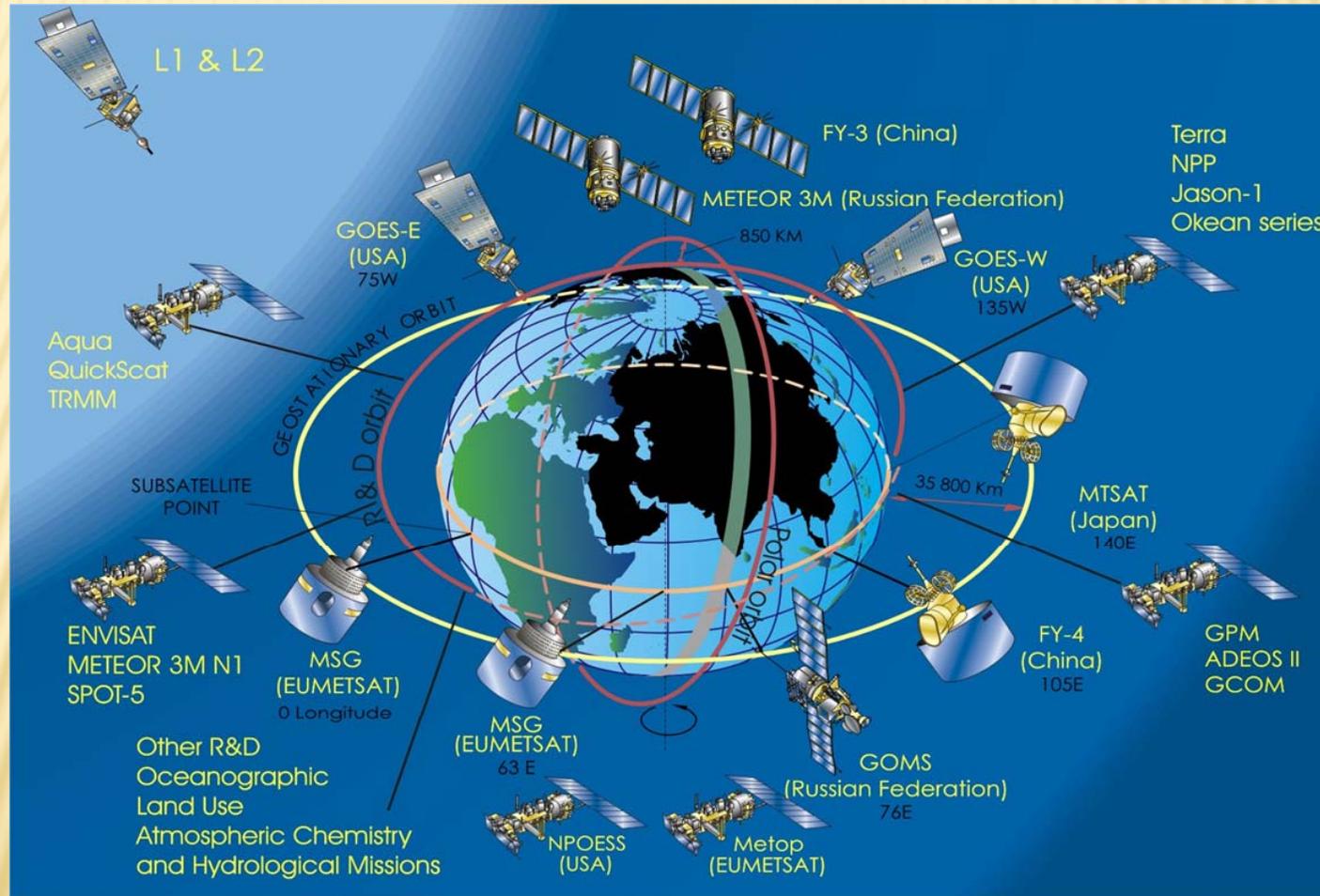


Evacuation route

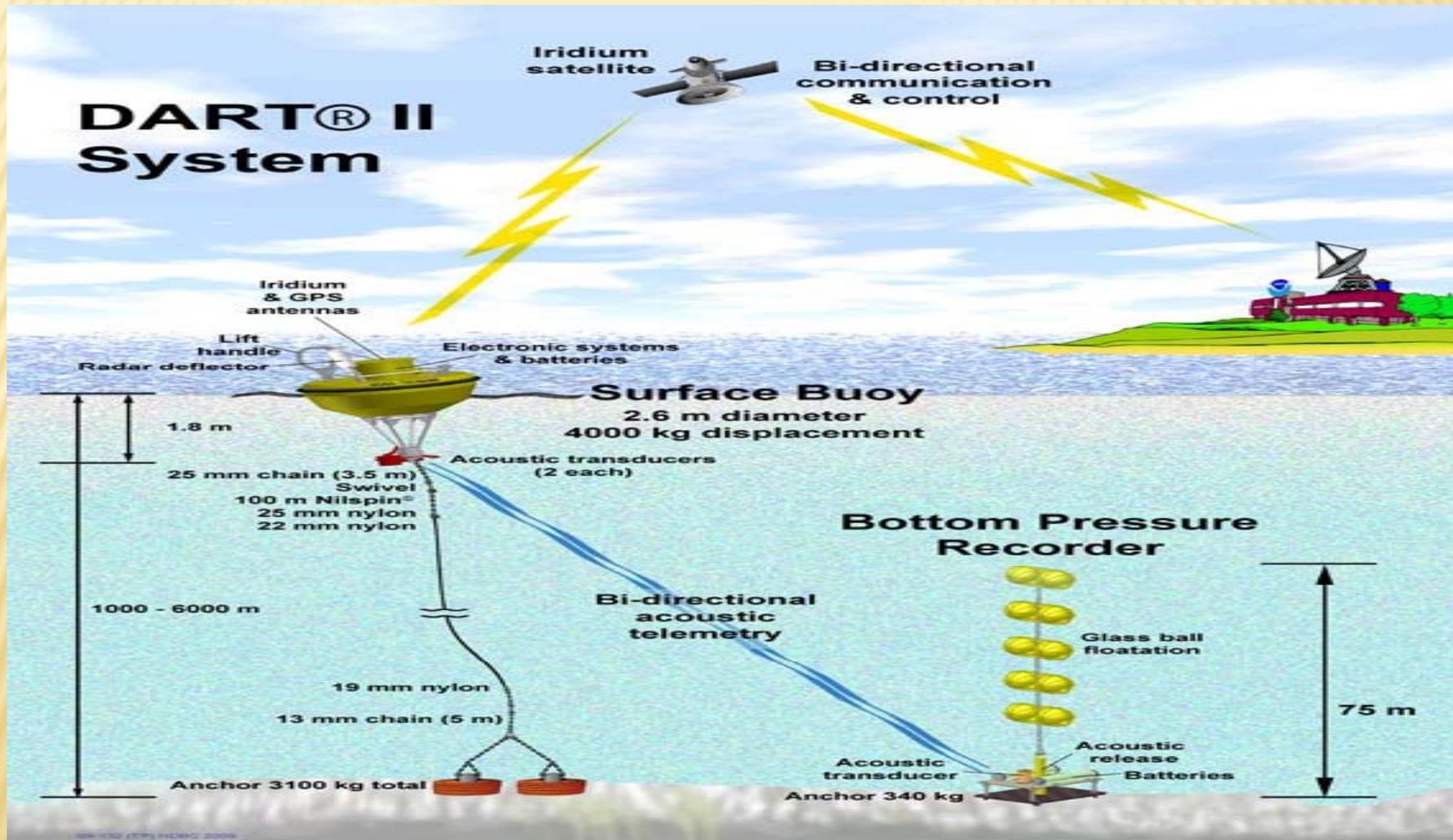
✘ Evacuation directions set up



RISK IDENTIFICATION: MONITORING



EARLY WARNING SYSTEM

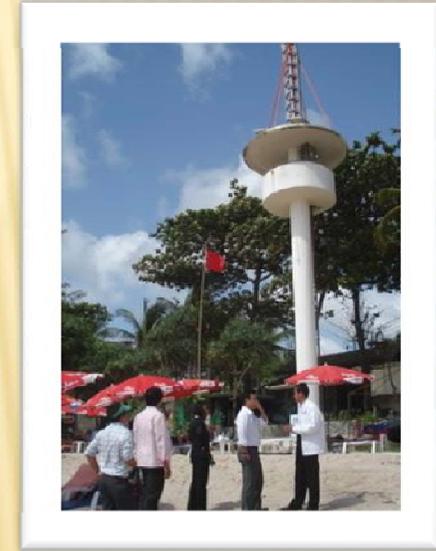


ภาพ: แสดงอุปกรณ์และระบบการทำงานของระบบตรวจวัดคลื่นสึนามิ
(Deep-ocean Assessment and Reporting of Tsunami : DART)

NATIONAL EARLY WARNING TO LOCATION



WARNING SYSTEMS AND EVACUATION ROUTES



DRILLING FOR EVACUATION PROCEDURE ON 13 SEPTEMBER 2010

✘ Evacuation Process:

1. Warning and alarm.
2. Evacuate along the route.
3. People moves to a high ground or high building follow the signs.
4. Vehicles have to move away from the beach front.
5. Police and volunteer are in places.
6. Stay until safety situation is announced and dismissed.





REAL SITUATION ON **APRIL 11TH, 2012** INDIAN OCEAN EARTHQUAKES AT 8.6 MW.

Situation reports:

15.30 Feeling the strong vibration.

15.45 Message of Earthquakes in Indian Ocean was announced.

16.25 Early Warning Office has announced for evacuation.

16.40 Hawaii Tsunami Center has announced for Tsunami impacts.

17.20 Citizen and Tourist have evacuated from risk area to higher ground.



EVACUATION IS UNDER CONTROL AS PLANNED BUT STILL CHAOTIC



WHAT WAS HAPPENING DURING THE REAL SITUATION OF THE EARTHQUAKES? (-)

Weakness:

1. Tourist and Citizen are chaotic during the evacuation.
2. Vehicle was moving in the wrong direction without rules.
3. Communications failure.
4. Lack of information for tourist during the evacuation.
5. Same sound of warning siren and safety siren.





WHAT WAS HAPPENING DURING THE REAL SITUATION OF THE EARTHQUAKES? (+)

✘ Strength:

1. Police and volunteer guards were replaced in the risk area.
2. Evacuation routes indication was very useful to guide the way for tourist and citizen.



FROM THE SITUATION ON APRIL 11TH, 2012

✘ What we have learned from the situation and need to be improved;

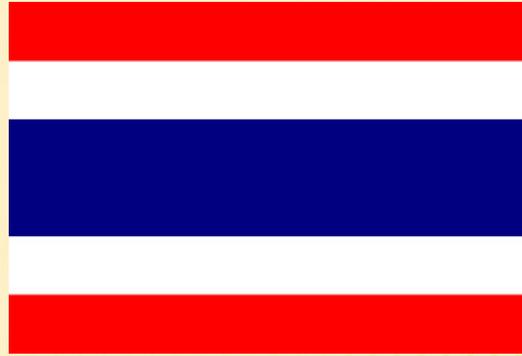
1. Communication failure during the situation.
2. Traffic was uncontrolled.
3. Evacuation route for walking way and vehicle should not be on the same route and same safety place.
4. Sound of siren for emergency warning and safety signal should be different.

PHUKET SCENARIO

- ✘ Chances of occasion with Tsunami, Landslide, Earthquake or flood.
- ✘ 2,400 hotels with 100,000 rooms/night.
- ✘ Tourist at 12 million per year.
- ✘ Registered population of 351,000 people.
- ✘ Non registered population of 300,000 people.
- ✘ 7 hospitals with 1,186 beds.
- ✘ Mass transport end after 18.00 hrs.
- ✘ Tallest building has 23 floors.

WHAT IS PHUKET RESILIENCE TO DPM.?

- ✘ What if ... Phuket has encountered the ?
- ✘ Answers is turn to questions:
 - How many people involve in the scenario?
 - Do we have enough space for injured people?
 - Do we have rescue team with experiences?
 - Who will be the crisis commander?
 - Do we have enough equipment to support?
 - How high of the fire truck ladder can reach?



Thank you and Khob Khun Krub

