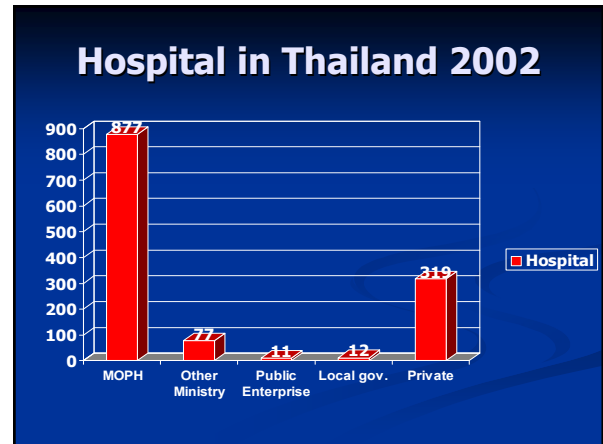
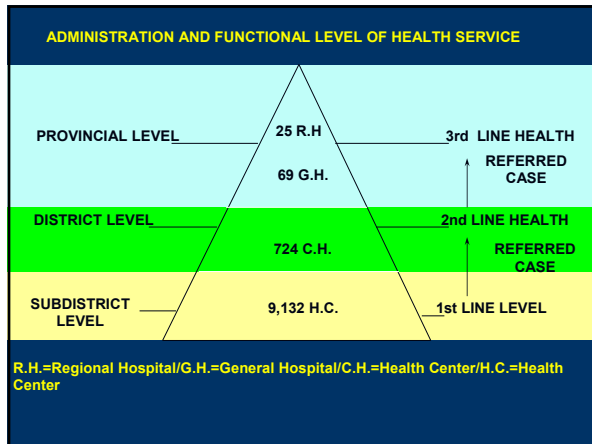


PUBLIC FACILITIES FOR HEALTH SERVICES		
POP. SIZE	ADMIN. LEVEL	HEALTH SERVICE COVER.
1. 300,000-1,000,000	75 PROVINCES	94 R.H.&G.H.
2. 100,000-200,000+	794 DISTRICTS	724 C.H.
3. 5,000-10,000+	7,255 TAMBONS	9,132 H.C.



- ### Thailand Private Health Facilities
- Private Hospital : 333 hospitals, 35,792 beds
 - Total Private Clinics : 3,781 clinics
 - Medical clinic 1,857
 - Dental clinic 1,183

- ### Thailand's experiences with natural disaster
1. Tropical storm
 2. Flood
 3. Landslide / Mudslide
 4. Flash flood
 5. Drought
 6. Cold spell
 7. Forest fire
 8. Earthquake
-

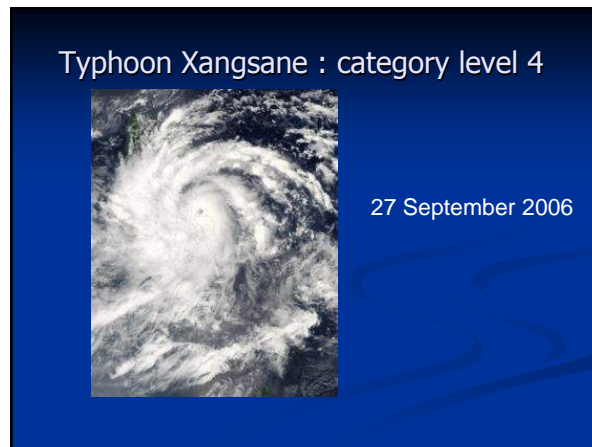




Flash flood/Mud slide

* May 2006 : 5 Northern provinces

Death **88** persons Missing **29** persons

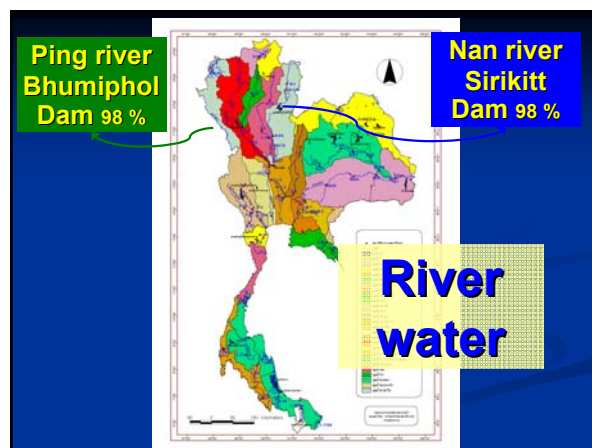


Typhoon Xangsane : category level 4

27 September 2006



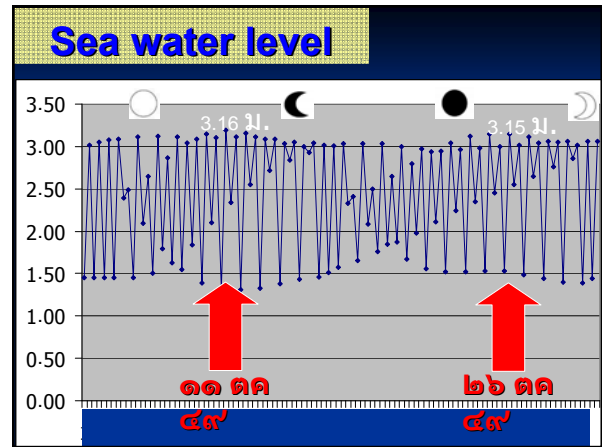
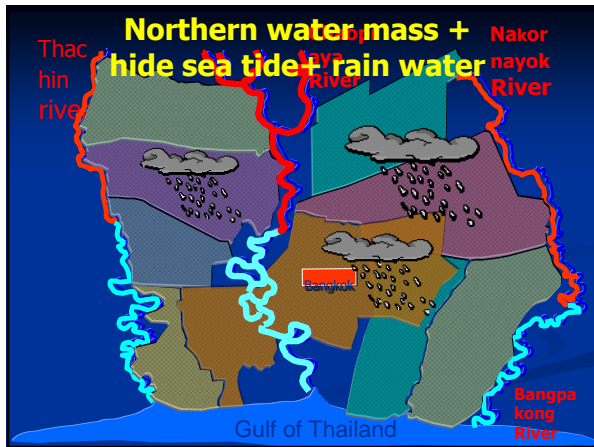
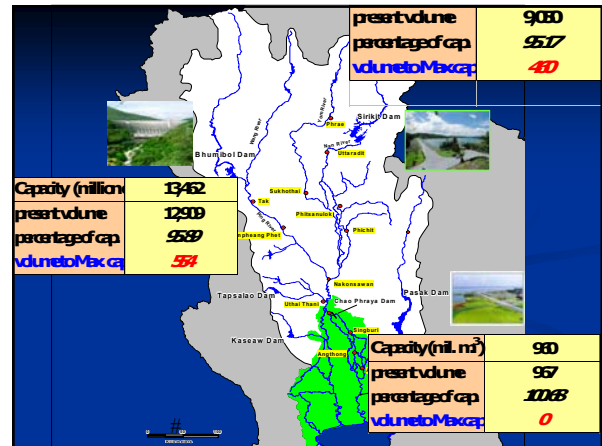
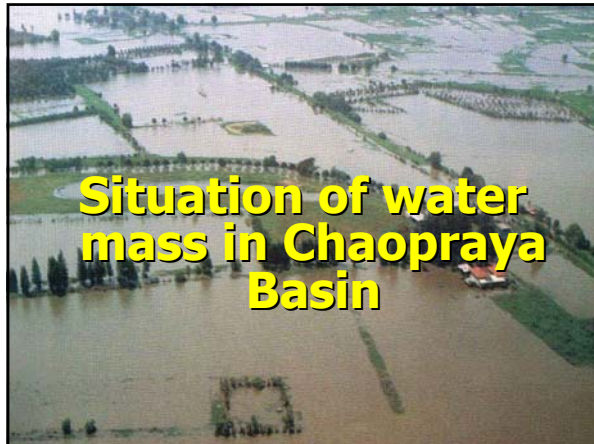
Route of Typhoon Xangsane 2006



Ping river
Bhumiphol
Dam 98 %

Nan river
Sirikitt
Dam 98 %

River
water



Immediate Health Response and Recovery Plan		
At risk area	Specific Problems	Risk Management
1. North ChaoPhaYa Basin	Huge mass of water from 2 dams	<ul style="list-style-type: none"> Activate Disaster Response Plan Logistic Support Support Medical Mobile Unit
2. Central Plain	<ul style="list-style-type: none"> River water from the North Sea water 	<ul style="list-style-type: none"> Surveillance Sanitation Mental Health Recovery Plan

Immediate Health Response and Recovery Plan		
At risk area	Specific problem	Risk management
3. Bangkok metropolitan and provinces around	Over flow from chaopraya river make flood in some areas	<ul style="list-style-type: none"> Co ordination of plan with Bangkok metropolitan
4. Southern region	Flash flood and mudslide in case of seasonal tropical storm	<ul style="list-style-type: none"> Alert southern provinces check preparedness plan Prepare mobile medical unit and health facilities

Recovery Plan after Flood

- Flood victims and community
- Provide Medical Care
- Psychological Support
- Sanitation, Safe food supply, Clean water supply, Toilet, Sewage management

Recovery Plan after Flood

- Flood victims and community
- Epidemiological and disease surveillance, communicable disease prevention and control
- Housing and Occupation Rehabilitation

Recovery Plan after Flood

For Health Care and Administration Institutions

- Assessment of the damage
- Propose Budget Plan to replace new building equipment and medical supply
- Support HR Rotation to replace fatigue Health personnel

Southern Provinces Man-made Disaster in 38 months



Summary of Incidents 6,214 incidents

- Death	2,088	cases
- Injured	3,290	cases

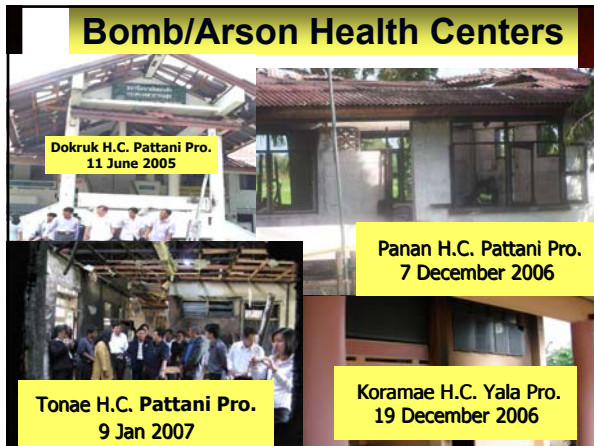


Impacts to Health facilities

Bomb, Arson to Health Centers

Pattani	9	health centers
Yala	4	health centers
Narathivat	0	
4 Districts in Songkla	0	





Impact to Health Personnel

	Injured	Deaths
Pattani P.	7	5
Yala P.	4	1
Narathivat P.	4	2
4 Districts in Songkla P.	4	0
Total	19	8

Impact to Village Health Volunteer

	Injured	Deaths
Pattani	3	10
Yala	0	5
Narathivat	6	14
4 districts in Songkla	0	0
Total	9	29



Impact on Health Facilities

- 1 Hospital
- 9 Health centers
- 2 Ambulances
- 10 Motorcycles
- 7 Health personnel dead
- 26 Health volunteers dead


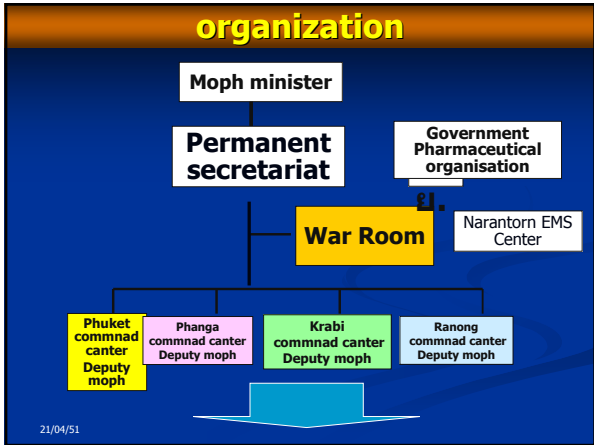




Rescue and Treatment of Survivor

Golden Period 1st 24 hours

- Key success factor :
- Health infrastructure and health system

- Mobilize health personnel, medical equipments, drugs, ambulances from other areas
- Refer severe cases

- Mobilize health personnel, medical equipments, drugs, ambulances from other areas
- Refer severe cases

Hospital during the even



Evacuation

Response of Thai hospitals to the tsunami disaster.

- In Phuket, most patients were evacuated early to secondary (district) and tertiary (provincial) hospitals. Hospitals recalled staff rapidly and organized the emergency department for patient triage, treatment, and transfer if needed.
- *Leiba A, Ashkenasi Y, Nakash G, Pelts R, Schwartz D, Goldbera A, Levi Y, Eyal-Payan Y, Faculty of Health Sciences, Ben Gurion University, Beer-Sheva, Israel. The Israeli Defense Forces (IDF) Home Front Command (HFC) Medical Department*

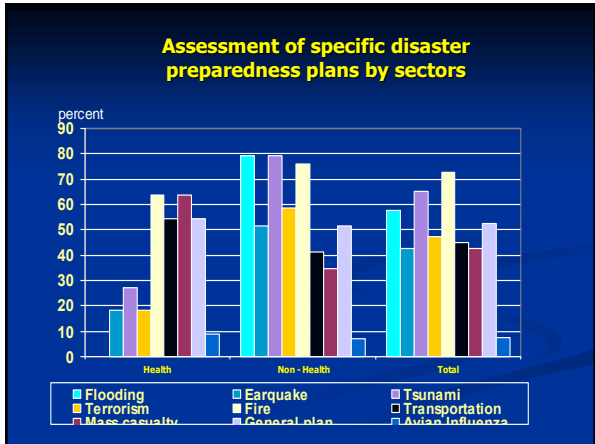
Rapid assessment of health needs and medical response after the tsunami in Thailand, 2004-2005.

- The response of the Thai government to the tsunami was rapid and effective in mitigating the health consequences among survivors and helped prioritize public health interventions and the diversion of U.S. assistance to areas with greater need for international emergency humanitarian assistance.
- *Linka-Gierulka-Buzqueña S, Jongsakul K, Smith B, Ittiyakul M, Chiravatanond D, Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand.*
- *PMID: 17447613 (PubMed - indexed for MEDLINE)*

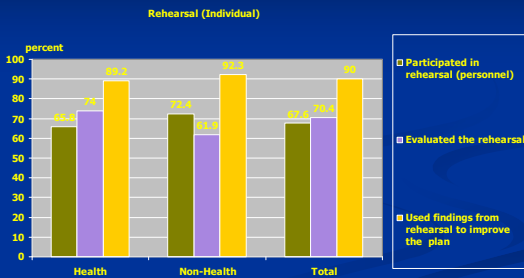
- Do some / many / most health facilities have disaster plans?
 - Are hospital staff familiar with the plan? Do they know their role?
 - Have you, or do you know of a hospital that has experience in handling a large influx of patients in disasters?"
 - Has staff received specialized emergency/disaster training?
 - Are hospital plans tested regularly using drills and/or simulations?

The Assessment of Current Situation on Emergency Preparedness for the Health Sectors and Communities in Thailand

- *The EHA of WHO Thailand's collaboration with (MOPH).*
- *The pilot study will be linked with the existing on-going TRIAMS project in the Southern Thailand that includes Phuket province.*



Rehearsal/training



Every hospital in Thailand joint hospital accreditation program

- The first step in HA is Risk management
 - Risk Identification
 - Risk Assessment
 - Action to Management Risk
 - Evaluation

Risk Analysis Grid

Degree	low	medium	high
frequency			
low	★	★★	★★★★★
medium	★★	★★★	★★★★★
high	★★★	★★★★	★★★★★



EMS Strategy plan for donation to his majesty the king on the 60 years anniversary of his throne

- Objective
 - Reduce mortality / Deformities / Complication
 - Reduce the loss value (economic & social)
 - Develop EMS (Pre hospital care)
 - Develop Emergency room
 - Develop Disaster management system
 - Principle
 - Equity service system which relate to thai context
- Goal on 2009
- Crisis patient accessed to ems.system $\geq 50\%$
 - Reduce mortality $\geq 15\%$ compare with 2006
 - The coverage of ems. unit
 - Standard of personal
 - Well training 3 years after graduated general doctor ≥ 2 persons per province
 - Knowledge management

1. National Policy

- Body Permanent **ไม่เปลี่ยนแปลง** - เสถียร
- Unique strong policy / methods / protocol

2. Investment

- National, Regional, local
- Personnel's [EMT, B, FR]
- Equipments
- Knowledge
- Communications ,Technology
- Co-ordination - Data base
- Networking Building
- Knowledge Management

3. Legally / Regulation

- CIVIL defense ACT B.E. 2522(1979), new version B.E. 2535
- Act B.E. 2543 for compensation to Volunteer who death or injured from rescue the victims with human being
- Social welfare Act B.E. 2546
- Nursing home Act B.E. 2540
- Emergency Health Act B.E. 2551
- National defense plan B.E. 2545/2551



Multi-sectoral

Drill

EICS training

General Population

Airport Drill

PEMIX 2007(6 Sep 07)

Air and Sea Rescue

**HYPERBARRIC
CHAMBER**

Equipment



Tsunami evacuation Drill



Drill



Shelters



Challenges

- Public awareness
- National Policy for Health Facilities Safe from disaster
- Investment in structural preparedness especially old buildings
- Capacity building especially in human resource development
- Coverage of law implementation of law in earthquake resistance building

“Lose is Gain
if we learn from it.”



