



Department of Disaster Prevention and Mitigation  
Ministry of Interior



- **Disaster Risk Ranking in Thailand**
- **Recent Floods in Thailand**
- **Measures**
- **Lesson Learnt**
- **Conclusion**



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Disaster  
Situation in  
Thailand



**Nakhon Ratchasima : Oct, 2010.**



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Disaster  
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**Nakhon Ratchasima : Oct, 2010.**





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*Disaster  
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**Hadyai, Songkhla : Nov, 2010.**



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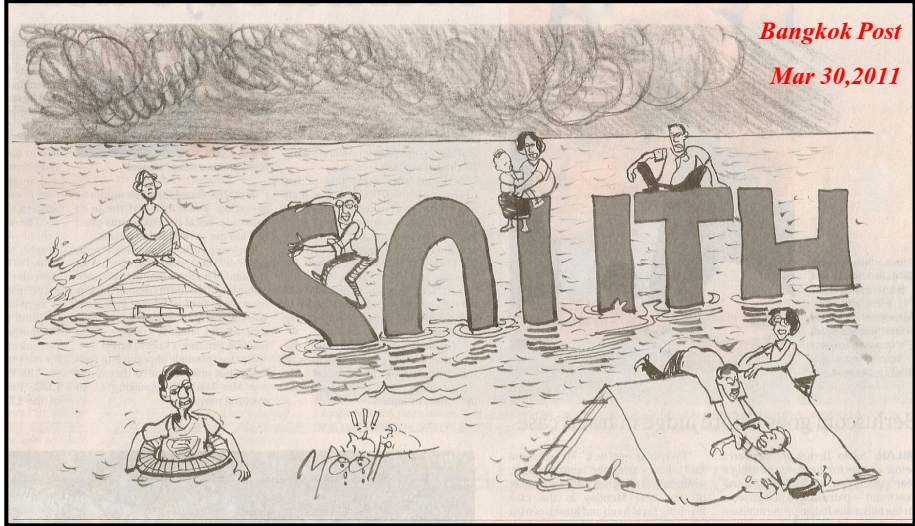


**Hadyai, Songkhla : Nov, 2010.**



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*Disaster  
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*Bangkok Post  
Mar 30, 2011*



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**Krabi : Mar, 2011.**





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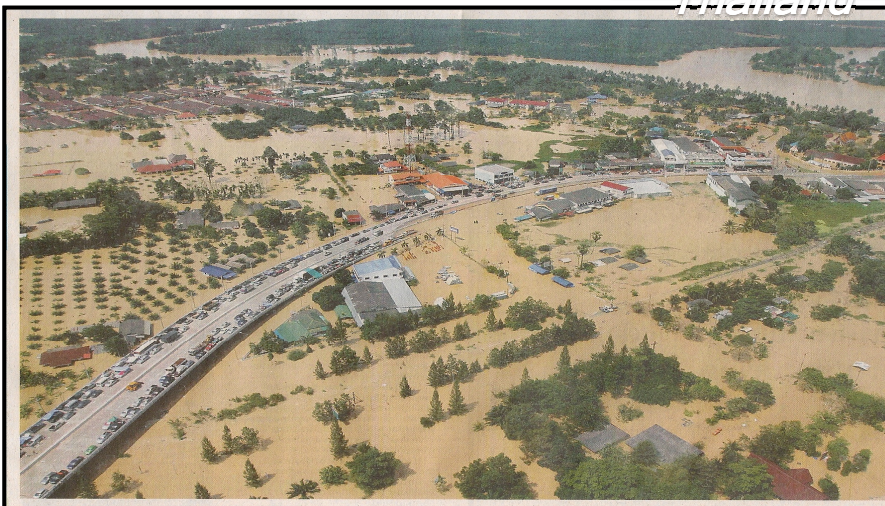


**Nakhon Si Thammarat : Mar, 2011.**



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**Surat Thani : Apr, 2011.**



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## Disaster Situation in Thailand



**Ko Samui, Surat Thani : Apr, 2011.**



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# 1. DISASTER RISK RANKING IN THAILAND



Relative Hazard Risk, Associated Vulnerabilities, Level of their Management and Risk of Disaster Occurrence in Thailand *				
	Hazard	Vulnerability	Management	Risk
<i>Flood</i>	<i>High</i>	<i>Moderate</i>	<i>Moderate</i>	<i>High</i>
Typhoon & Storm surge	High	High	Moderate	Moderate
Earthquake	Low	Low	Poor	Moderate
Landslide	Moderate	Low	Poor	Moderate
Drought	High	Moderate	Moderate	Moderate
Fire	High	Moderate	Moderate	Moderate
Explosion	High	Moderate	Poor	High
Major Accident	High	Moderate	Poor	High
Epidemic	Low	Low	Moderate	Low
Pest	Moderate	Low	Poor	Moderate
Civil Unrest	Low	Low	Poor	Moderate
Refugee Influx	Moderate	Low	Moderate	Moderate

\* Source : Strengthening Disaster Management Strategies in Thailand, Asian Disaster Preparedness Center (ADPC), Sponsored by UNDP under THA/88/004, March 1994.

Rank order of risks of disasters of Thailand*		
Hazard	Subjective Rank	Numeric Weight
<i>Flood</i>	<i>High</i>	<i>2.39</i>
Major Accidents	High	2.37
Explosion	High	2.34
Typhoon	Moderate	2.31
Drought	Moderate	2.24
Fire	Moderate	2.20
Landslide	Moderate	2.15
Earthquake	Moderate	1.97
Civil Unrest	Moderate	1.92
Refugee Influx	Moderate	1.87
Pests	Moderate	1.77
Epidemics	Low	1.63

\* Source: Annex E, Page E4, Strengthening Disaster Management Strategies in Thailand, Asian Disaster Preparedness Center (ADPC), Sponsored by UNDP under THA/88/004, March 1994.



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## 2. Recent floods in Thailand

### Floods Record in Thailand

Year	No. of affected Provinces (no.)	Damages		
		People		Damage Cost (Million Baht)
		Injured (persons)	Death (persons)	
2006	58	1,462	446	9,628
2007	54	17	36	1,688
2008	65	0	113	7,602
2009	64	22	53	5,253
<b>2010</b>	<b>63</b>	<b>1,664</b>	<b>299</b>	<b>14,575</b>

Note : Exchange rate 30 Bahts = 1 USD (approx)



## FIGURES OF RECENT FLOOD IN THAILAND

Year	Flood no.	Duration	Affected Regions (no.)	Affected Provinces (no.)	Affected Area (Rai)	Affected Inhabitants (persons)	Death (no.)	Damage Cost (Baht)
2010	5	10 Oct – 12 Dec	4 (N, NE, C, CE)	39	7.8 M	7.0 M	180	8,467 M
	6	1 Nov – 19 Dec	1 (S)	12	0.8 M	1.9 M	78	3,125 M
2011	1	22 Mar – 22 Apr	1 (S)	12	0.9 M	1.5 M	68	4,076 M

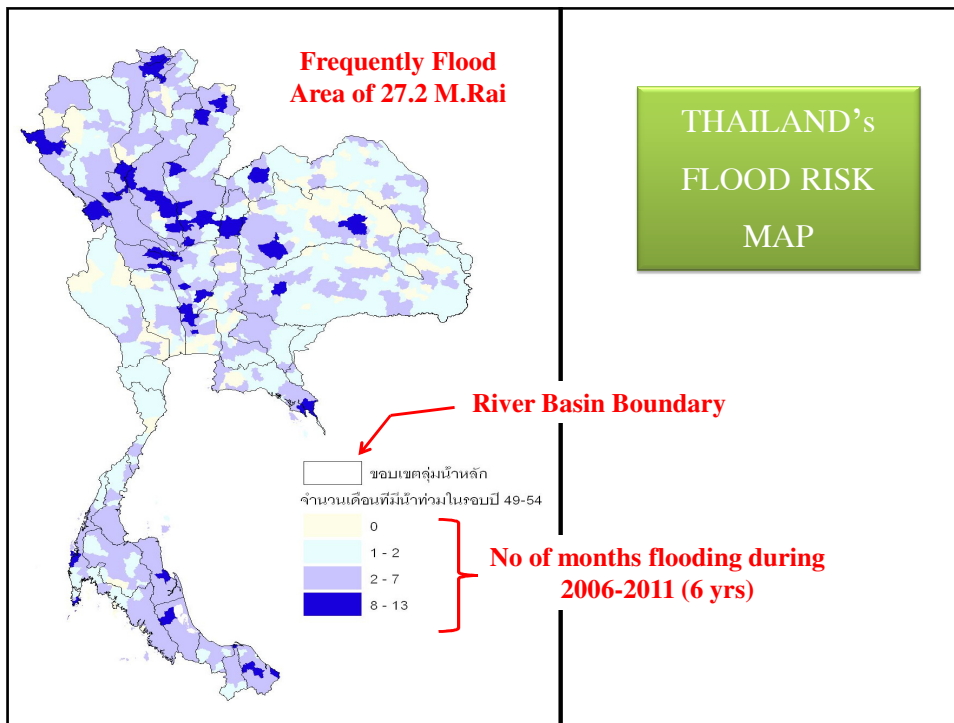
Remark : 1 Rai = 1,600 sq.m.  
30 Baht = 1 US. Dollar



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### Main Causes of Floods

- **Terrestrial Rain : 100 – 350 mm/day**
- **Non stop rain fall period : 3 – 4 days**
- ❖ **Thailand Average Annual Rainfall Intensity : 1,600 mm**



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## **3. Measures**





### **Immediate/Short term Measures**

- **A cash of 5,000 Baht** was provided to a household who were affected by a flash flood or submerged more than 7 days.
- **A cash of 20,000 Baht** was provided to a partially damaged house.
- **A cash of 30,000 Baht** was provided to a totally damaged house.



### **Immediate/Short term Measures**

(continued)

- The Government Donation Fund transfer budget the affected provincial governor to construct totally damaged house with supports from a private sector and NGO's. (190,000 Baht for a 3 family member house / 240,000 Baht for a 6 family member house)



## 4. Lesson Learnts



### LESSONS LEARNED

- Preparedness Level to be improved.
- Revision of all plans.
- Damage and Need Assessment to be improved.
- Donation system to be improved.
- Insurance system to be improved.



## LESSONS LEARNED

(Continued)

- **Korat Model** to be formulated for NakhonRatchasima and North Eastern Provinces.
- **Hadyai Model** to be formulated for Songkhla and Southern Provinces.
- **Lopburi Model** to be formulated for Lopburi and Central Provinces.



## Disaster Prevention and Mitigation Act 2007

- **Enacted on Nov 6,2007**
- **Termination of Civil Defense Act 1979**
- **Termination of Fire Prevention and Suppression Act 1999**
- **DDPM is the principal government agency in National Disaster Prevention and Mitigation.**
- **National Disaster Prevention and Mitigation Plan has to be formulated within 2 years.**





## National Plans

- The 11<sup>th</sup> National Economics and Social Development Plan 2011-2015 includes the effects of a global warming and a climate change.
- National Master Plan on Food and Energy Securities is formulated. (based on a global warming for the next 2-5 decades)
- National Disaster Prevention and Mitigation Plan 2010-2014 is a national framework for all sectors to play their roles on Disaster Risk Reduction and Disaster Management. (approved by the cabinet on November 17, 2009)



## Master Plan / Action Plan

- Master Plan on Floods / Storms / Landslides Prevention and Relief was formulated and approved by the cabinet on September 25, 2007.
- 3-Year Action Plan on Floods / Storms / Landslides (2010-2014) according to the above Master Plan was formulated and approved by the cabinet on August 2009.



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## PROVINCIAL / DISTRICT / LOCAL / COMMUNITY PLAN

- 18 Provincial Cluster Disaster Prevention and Mitigation Plans were formulated and utilized.
- 76 Provincial Disaster Prevention and Mitigation Plans were formulated and utilized.
- Bangkok Metropolitan Administration (BMA) Disaster Prevention and Mitigation Plans were formulated and utilized.



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## PROVINCIAL / DISTRICT / LOCAL / COMMUNITY PLAN

- 878 Districts Disaster Prevention and Mitigation Plans were formulated and utilized.
- 7,405 Tambon (Sub-District) Disaster Prevention and Mitigation Plans were formulated and utilized.
- More than 5,585 Community Disaster Prevention and Mitigation Plans were formulated and utilized. The target to achieve 75,000 Community Plans in near future.



## Annual Exercise

- Regional Level : ASEAN's ARDEX is conducted once a year.
- National Level : A Crisis Management Exercise (CMEX) is conducted once a year.
- Provincial Cluster Level : the exercise is conducted once a year.
- Provincial Level / BMA Level : the exercise is conducted twice a year.
- District Level : the exercise is conducted once a year.



## DEVELOPMENT DIRECTION

- National Disaster Data Bank is on the way to be developed and expected to be completed by 2011.
- More Rain-Gauges/ Run off stations/ Telemetering stations to be added.
- A number of Mister Disaster Early warning to be increase.

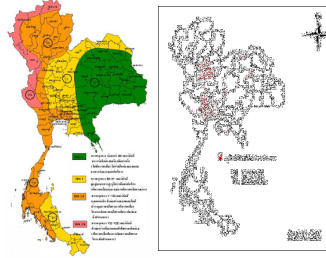






## DEVELOPMENT DIRECTION

- Flood Early Warning Systems to be improved.
- The GIS / Satellite Images / Flood Numerical models are to be applied much more.
- Town Planning and Water Resources Planning to be integrated to Provincial Development Strategy.



## Conclusions

- Flood Prevention is worth investment.
- Data base and information are worth decision making.



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**THANK YOU  
&  
SAWASDEE**

