

Progress Report

On

Flood Hazard Mapping in Thailand

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Flood situation in Thailand

Year	No. of Flood Event	No. of Affected Province	Number of People			Number of Houses		Damaged Agriculture area (km ²)	Losses Value (million USD)
			Affected	Dead	Injured	Totally Damage	Partially Damage		
1997	7	64	4,069,006	98	427	991	14,445	19,630.42	119.51
1998	12	65	1,649,752	8	3	1,022	11,201	745.72	53.31
1999	9	69	4,560,517	53	30	967	10,272	4,861.07	43.18
2000	12	62	6,739,652	120	0	12,650	33,724	16,544.93	313.53
2001	14	60	3,454,265	244	68	315	13,239	46,614.02	114.57
2002	5	72	5,127,652	216	0	1,135	130,136	16,696.18	418.29
2003	17	66	1,882,017	44	10	18	10,311	2,552.89	64.07
2004	12	59	2,324,441	28	3	297	5,536	5,277.97	26.58
2005	12	63	2,874,673	75	0	275	5,697	2,722.32	186.95
2006	6	58	6,050,674	446	1,462	1,583	69,887	10,496.87	300.86

Data Source : Disaster Prevention and Mitigation Department, Thailand

Current stage of FHM in Thailand

Map types which are available in Thailand;

- A: Location map not including elevation data
- B: Location map including elevation data
- C: Past inundation area of a single past flood
- E: Past inundation area based on simulation
- F: Inundation area of the design flood
- G: Indication forecast by real time analysis.

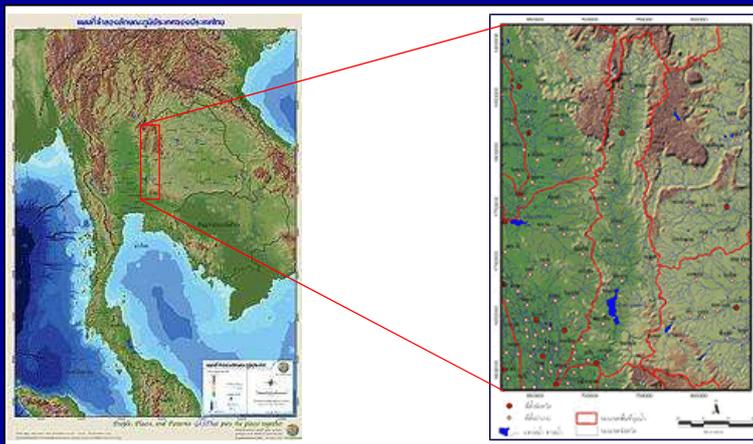
D: Past inundation areas of several large floods with corresponding rainfall is not available

The outline of current situation of FHM in Thailand

- Many FHM-related projects were developed in Thailand
- FHM issue in Thailand is in the starting stage
- The exact number of FHM-related project has not been collected.

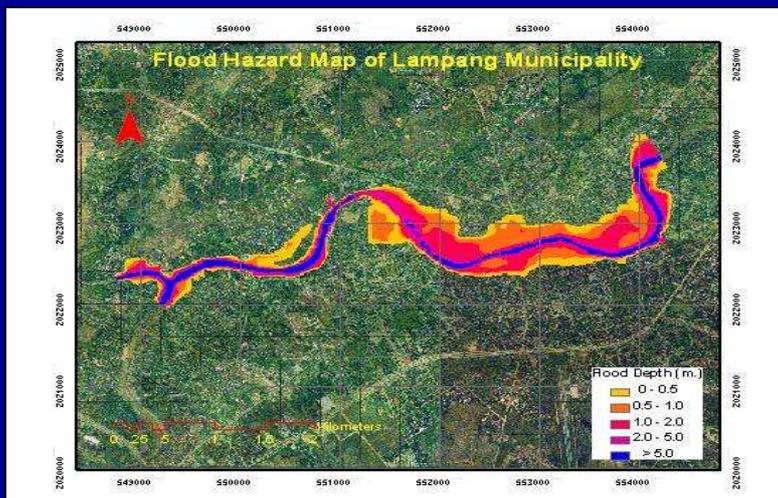
Examples of good FHM-related projects

1. Development of River Basin Flood Management System by Optimal Reservoir Operation and Real Time Flood Forecasting and Warning: A Case Study of Pasak River Basin.



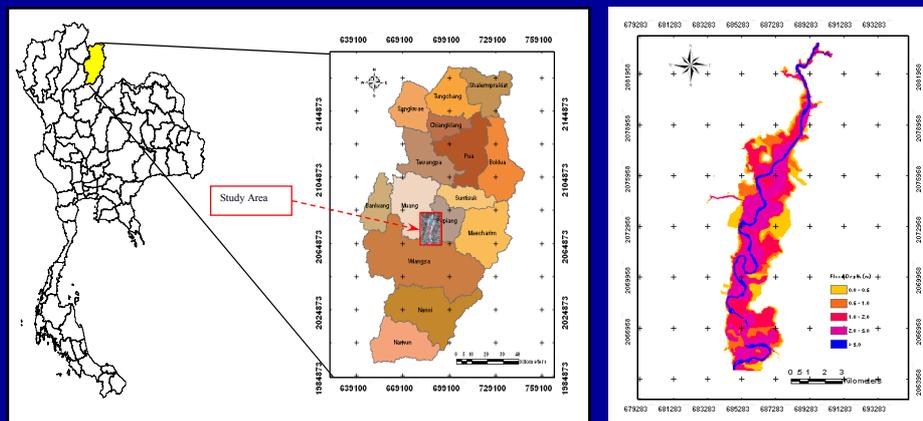
Examples of good FHM-related projects

2. Flood hazard mapping of Lampang municipality.



Examples of good FHM-related projects

3. Flood hazard mapping in Nan province of Thailand under the Nan river basin.



JAXA sponsored project under JAXA-AIT Mini Project

Target/necessary stage of FHM in Thailand

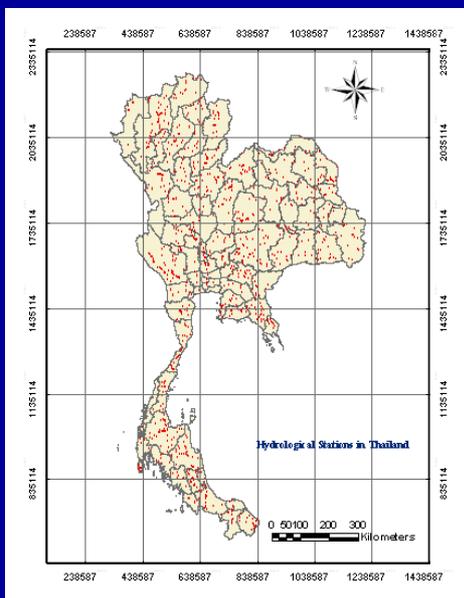
- At least the F-type FHM is necessary for the effective flood warning
- The G-type FHM is the target for the important and complicated area

Institutional situation for making FHM

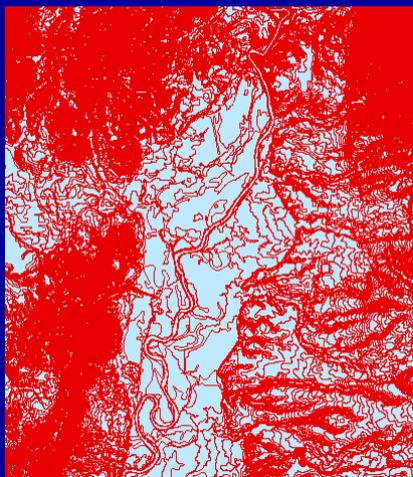
- There are no laws in Thailand which indicate about FHM
- No organization is assigned to take responsibility in making FHM.

Hydrological/topographical data situation for making FHM

- Hydrological data in all river basins of Thailand is available.
- The digital elevation model (DEM) throughout Thailand already Developed by the Land Development Department of Thailand.

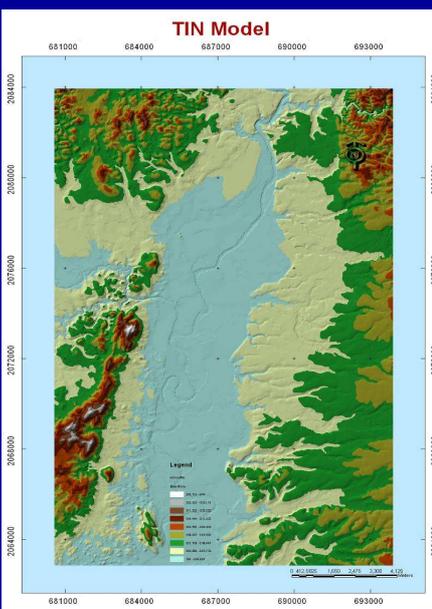


There are 1,127 hydrological stations in all river basins throughout Thailand.



Contour data generated from DEM

TIN model generated from contour



Problems for making FHM in your country

- The knowledge and technologies in Thailand are enough for making FHM.
- The only one problem of making FHM in Thailand is the policy.

Institutional situation for disseminating/use FHM

- No organizations and no laws related to dissemination of FHM.

Problems for disseminating/use of FHM in Thailand

- The same as problems for making FHM

How to use FHM in Thailand

- In Thailand, FHM is used for the officials to provide timely and reliable flood warning and flood information to the people so that they can evacuate on time.

Conclusions

- Flood is the natural phenomena. It exists and still exists.
- Structural measures are still important for flood mitigation.
- Non-structural measures are also important to support the effectiveness of structural measures and to cover the cycle of flood management system.
- Problems on making and dissemination of FHM exist for us to be overcome not for giving up.

