

East & Southeast Asia Regional Seminar on Flood Hazard Mapping, 17-19 February 2009, Manila, Philippines



Introduction to FHM related situation in Lao PDR

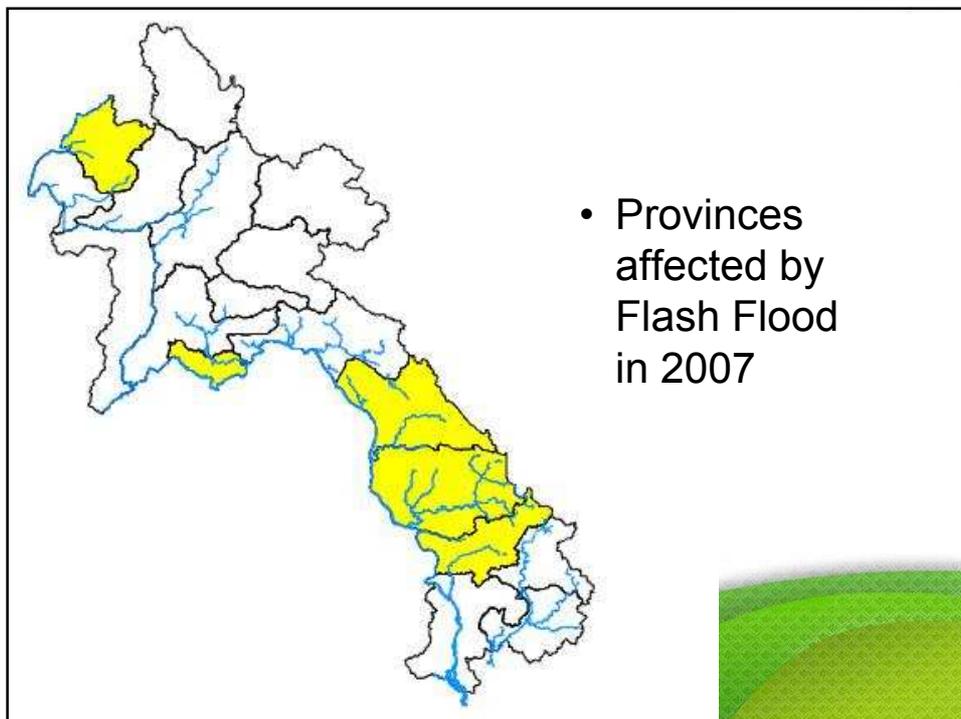
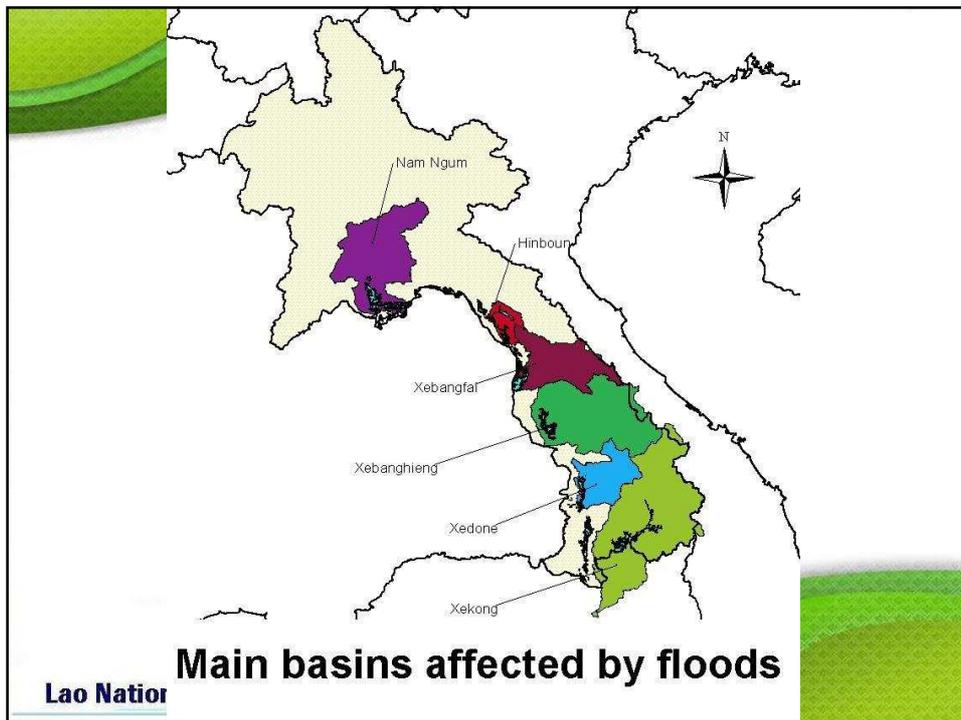
Compiled by Oudomsack Philavong

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Main floodplains

- The Vientiane Plain (Vientiane Municipality and Vientiane province),
- Khammouane Province (Thakhek Town and Xebangfai Mouth, Hinboun Mouth),
- Savannakhet Province,
- Saravan Province,
- Champasak Province (Pakse Town), and
- Attapeu province
- Louangnamtha Province (Flashflood)

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Flood statistics since 2002

Description	Flash flood damages in 2007	Flash flood damages in 2006	Flood damages in 2005	Flood damages in 2002
Provinces affected	4	5	16	13
Districts affected	27	20	84	62
Villages affected	614	404	2,510	1,142
Families affected	25,292	13,549	85,530	50,342
People affected	118,074	89,849	480,913	249,782
People killed	2	5	5	3
Hectares of rice and crop damaged	74,739.8	6,913	55,955	33,702
Total estimated cost damages in million US\$	N/A	3.1	18.3	N/A

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Flood in Xebanghieng in 2007



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Flood in Xedone in 2007



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Institutional arrangement for flood mitigation

1	Minister of Labor and Social Welfare	Chairman
2	Minister of Agriculture and Forestry	Vice Chairman
3	Chief of Cabinet , Ministry of Foreign Affaires	Vice Chairman
4	Chief of Cabinet, Ministry of Defense	Member
5	Chief of Cabinet, Ministry of Security	Member
6	Chief of Cabinet, Ministry of Education	Member
7	Director General of Budget Department, Ministry of Finance	Member
8	Director General of Transport Department, Ministry of Public Works and Transport	Member
9	Director of Industry Department, Ministry of Industry and Commerce	Member
10	Director of Hygiene Department, Ministry of Public Health	Member
11	Director of Mass Media Department, Ministry of Information and Culture	Member
12	Director of Social Welfare Department, Ministry of Labors and Social Welfare	Member
13	Chairman of Lao Red Cross Society	Member

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Flood Risk Maps implementation

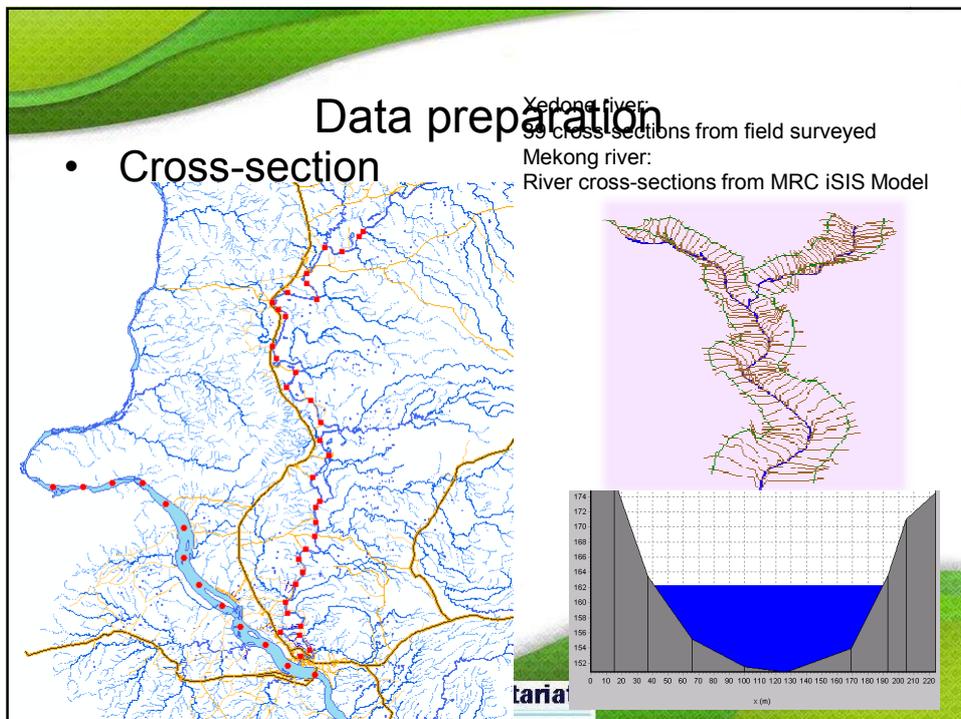
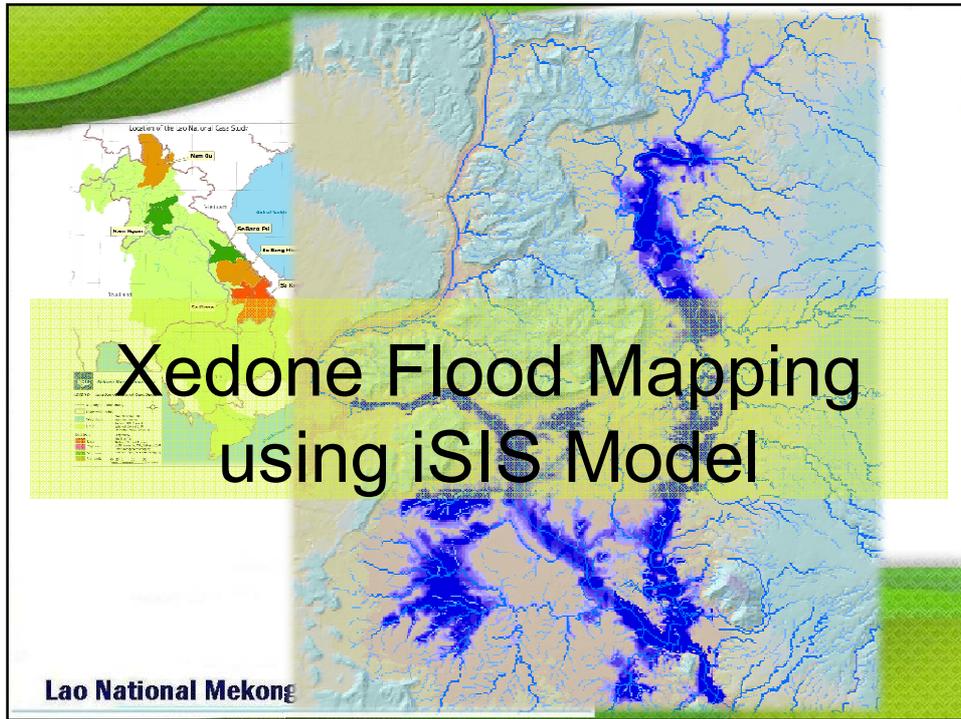
- Xebangfai Basin (done)
- Namtha Flashflood (under preparation)
- Xedone Basin (in progress)
- Xekong Basin (in progress)

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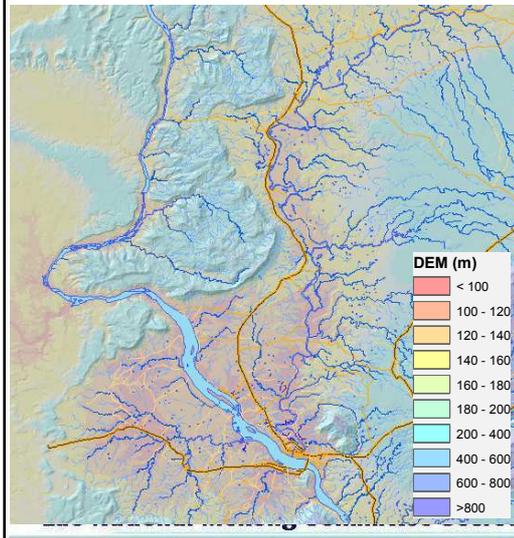
Actors in Flood Mapping

- Water and Environment Research Institute
- Department of Water Resources
- LNMC
- Department of Irrigation

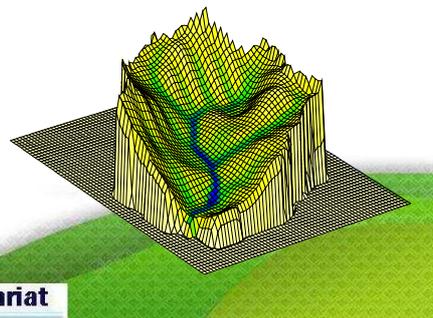
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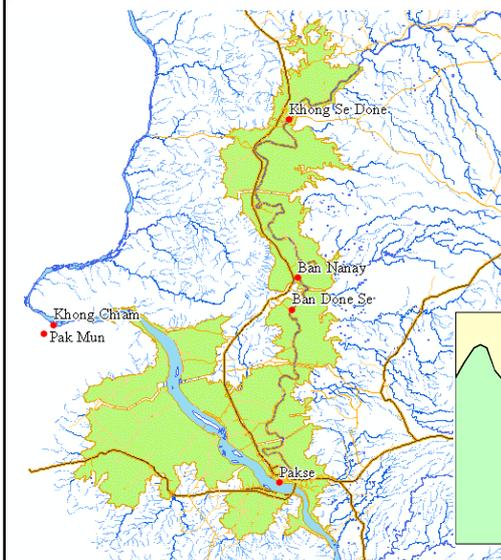
- Topographic Data



Digital Elevation Model (DEM) with 50m of cell size provided by MRCs

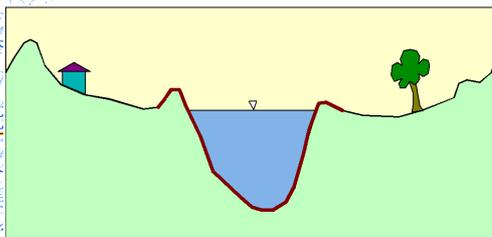


- Reservoir and Spill Data

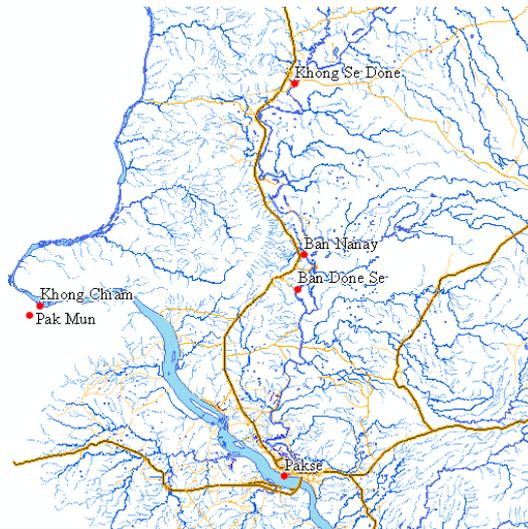


Reservoirs/Flood cell derived from generating by GIS tool based on water level and DEM and Flood area done by Department of Irrigation

Reservoirs



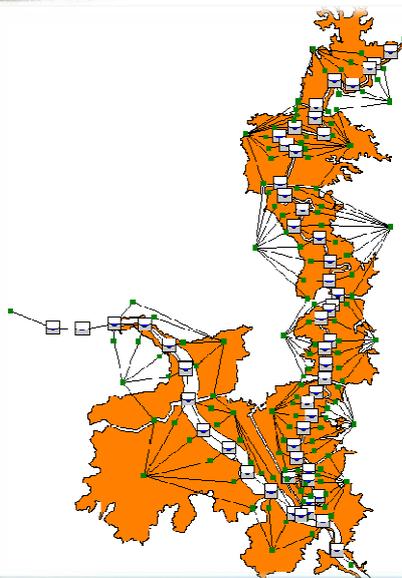
• Hydrological Data



Hydrological data available:

- **Flow :**
 SWAT model
 Khong Chiam
 Pakse
 Khong Se Done
 Ban Done Se
 Ban Nanay
- **Water level:**
 Ban Done Se
 Pakse

• Schematization



Upper boundary:
 Sedone at Ban Vapi
 Mekong at Khong Chiam Station

Lower boundary
 Mekong at Pakse Station

River Cross-section:
 Mekong : 13
 Sedone: 39

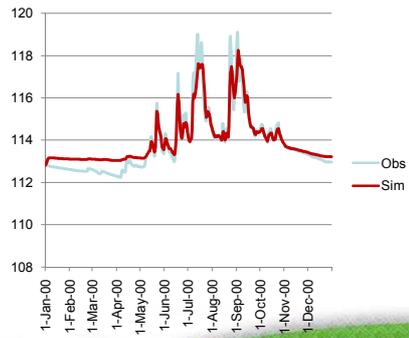
Reservoir: 17
 Spill: 105

• Calibration (at Souvannakhiri)

Calibrated Point

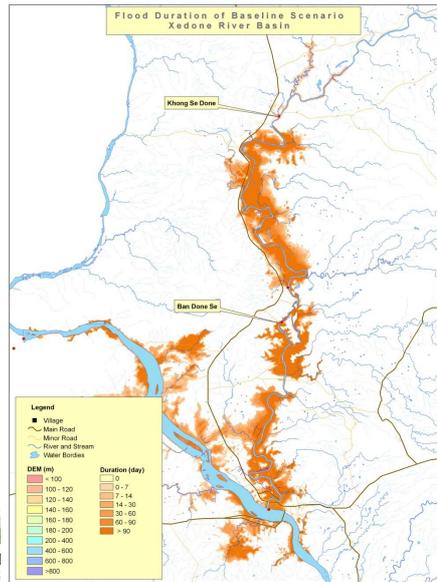
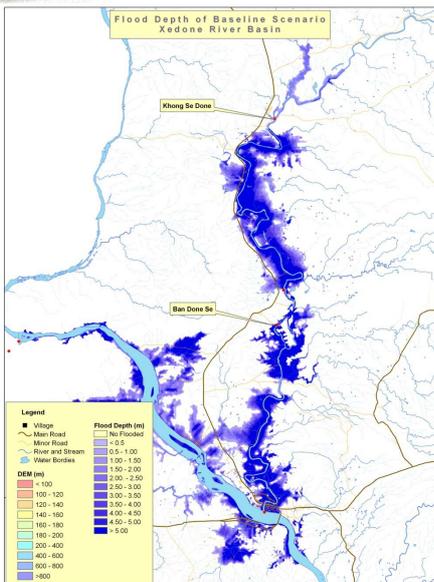


Calibrated Result



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• Results



Constraints

- No aerial photographs available

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