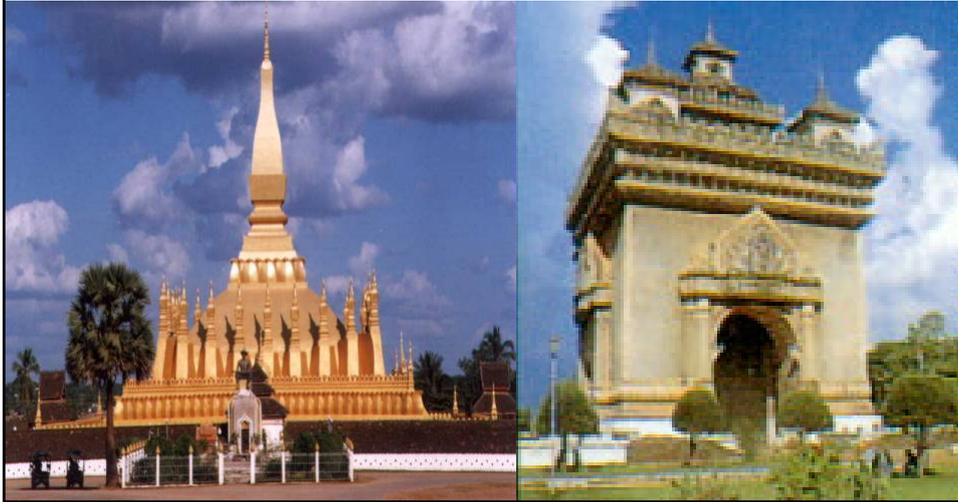


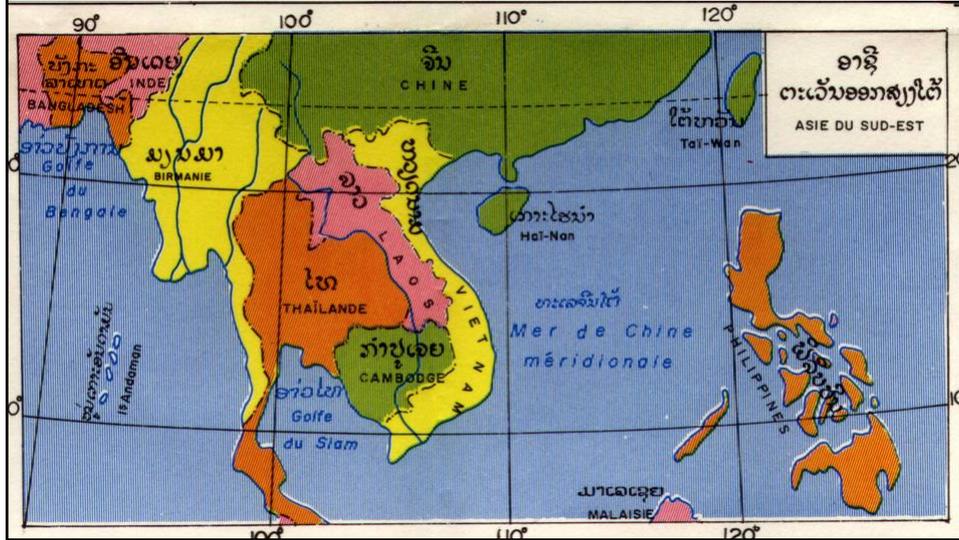
 **Lao People
Democratic Republic** 
Disaster Management in Lao PDR



Introduction

- **Country Profile**
- **Natural and Man-made Disaster in Lao PDR**
- **Disaster and the Impacts**
- **Disaster Management in Lao PDR**

LAOS AND ITS LAND-LINKED POSITION IN SOUTHEAST ASIA



Country Profile

- 16 provinces, 1 municipality and one special zone
- Capital City – Vientiane
- Land area of 236,800 sq. km.
- Arable land 4 %
- Covered by forest 46%
- Mountainous 70 %

Climate and Weather:

- Northeast monsoon affects – mid Oct to mid Apr, it's dry period with low humidity and temperature.
- Southwest monsoon affects – mid May to mid Oct, heavy rainfall and high humidity.
- Short drought period about two weeks, Jun – Jul.
- Annual rainfall ranges from 1,400 – 3,500 mm.
- Annual average minimum Humidity 65%, and maximum 95%.

Demography

- *Population of 5,777,180 million (2002 est)*
- **50.58%:Female and 49.42 %Male**
- **Average annual growth rate of 2.5%**
- **47 ethnic groups**
- ***Rural Population – 85%***
- **Birth rate: 36.9/1,000 population**
- **Death rate: 12.71/1,000 population**
- ***Infant mortality rate: 88.9/1,000 live birth***
- **Population density 20 persons per Km²**

Social Development Indicators

- **Population living below poverty line 40 %**
- **Life Expectancy 53.88 yrs.**
- **Female: 55.87 yrs; Male: 51.95 yrs**
- **Adult Literacy Rate 57 %**

Profile of Economic

*** Economic Indicator:**

Real GDP Growth Rate 5% (2001 est.)

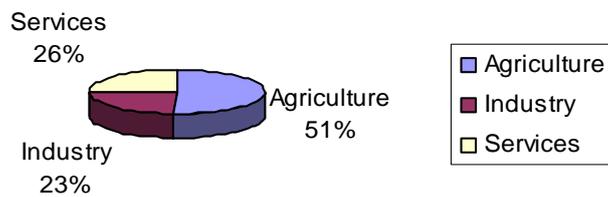
GDP Per Capita US\$ 320

Exports US\$ 325 million

Imports US\$ 540 million

Sector-wise Composition of Economy

- **Agriculture: 50.9 % of GDP**
- **Industry : 23.4 % of GDP**
- **Services: 25.7% of GDP (2001 est.)**



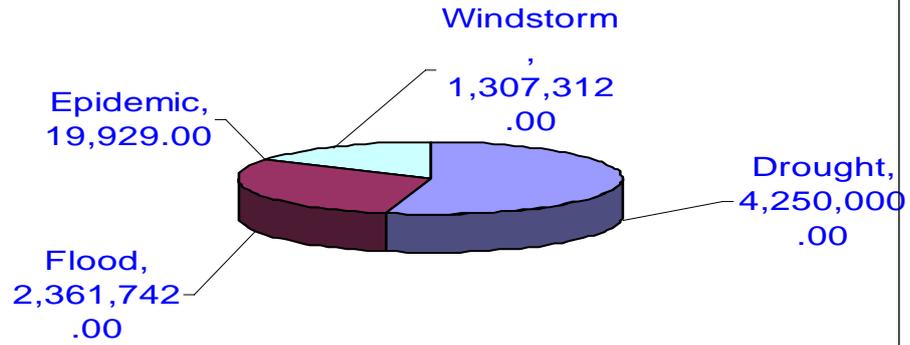
Hazards and Disasters in Laos

- **Natural Disaster:**
 - **Flood**
 - **Drought**
 - **Windstorm**
 - **Landslide**
 - **Epidemic**
 - **Pest**
- **Man-made**
 - **UXO**
 - **Fire**
 - **Road Accidents**



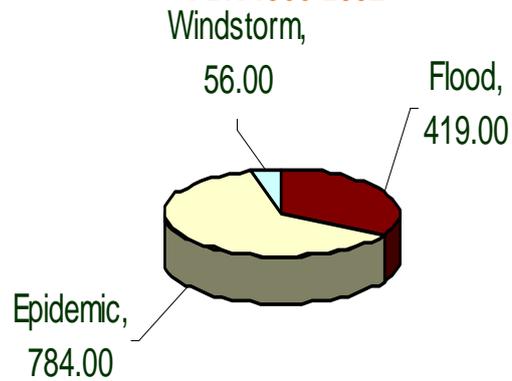
Natural Disaster in Lao PDR

Total Affected People by Natural Disaster in Lao PDR 1966-2002



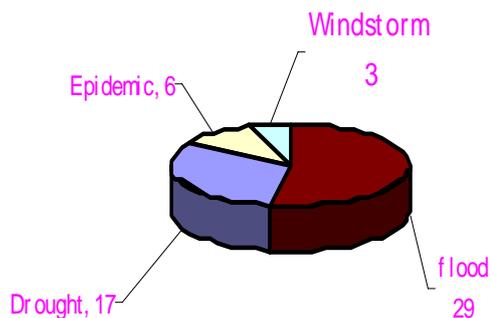
Natural Disaster in Lao PDR

Total People Killed by Natural Disaster in Lao PDR 1966-2002



Natural Disaster in Lao PDR

Natural Disaster Event in Lao PDR 1966-2002



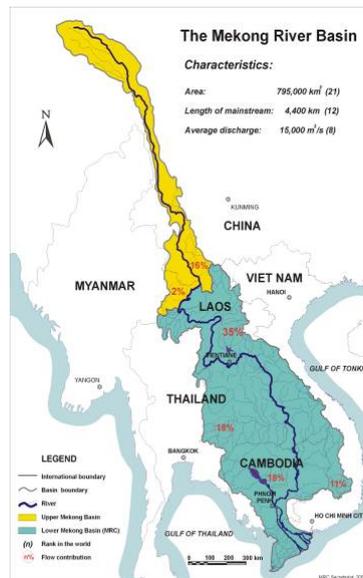
Flow Contributions:

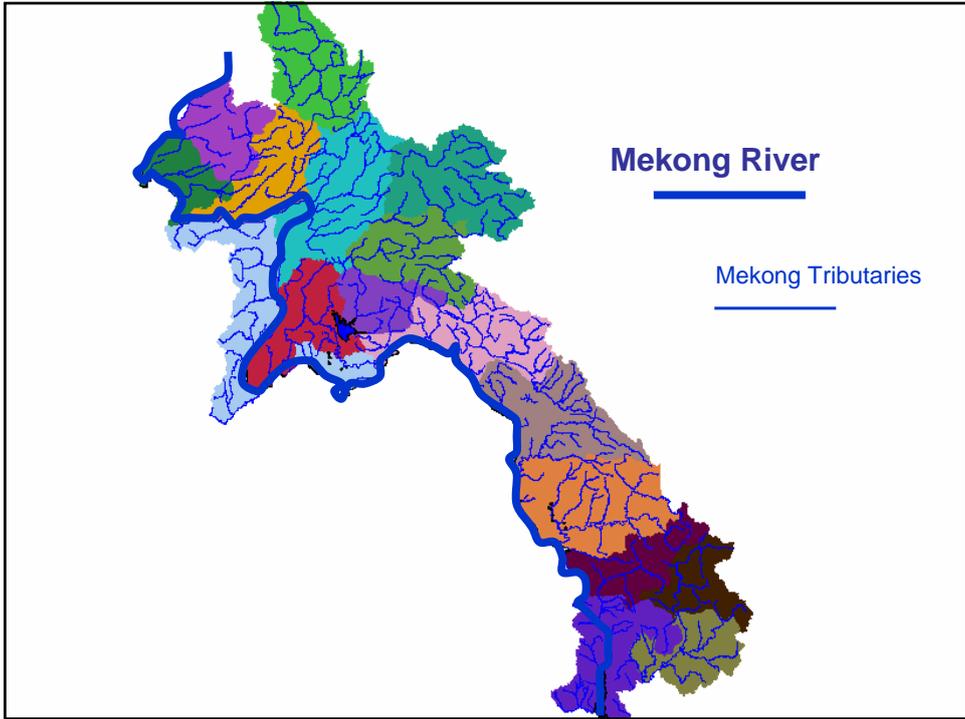
Upper Mekong (18%)		Lower Mekong (82%)	
• China	16%	* Cambodia	18%
• Myanmar	2%	* Lao	35%
		* Thailand	18%
		* Viet Nam	11%

Annual Rainfall in the Mekong Basin

Region	Annual Rainfall (mm)
Lancang River Basin	Variable. 600 mm in North, 2700 mm in south
Northern Highlands	Wet. 2000 mm to 2800 mm
Korat Plateau	Relatively Dry 1000 mm to 1600 mm
Annamite Chain	Wet. 2000 mm to 3200 mm
Southern Uplands	Very Wet. Up to 4000 mm
The Mekong Plain	Variable. 1100 to 2400 mm

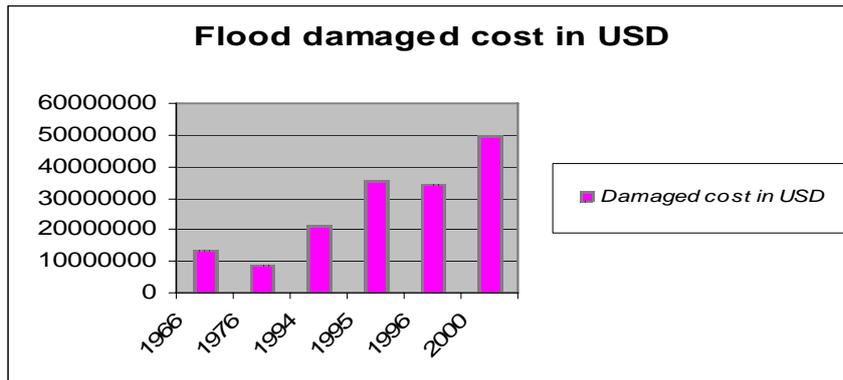
Source: MRC, *Appropriate Improvement of Hydrological Network*, 2001





Disaster and the Impacts

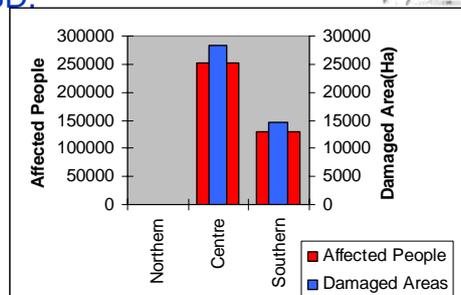
1966 – 2002, flood occurred 29 times, with severe damaged cost in 1966, 1976, 1978, 1994, 1995, 1996 and 2000 .



Disaster and the Impacts

Flood 2000:

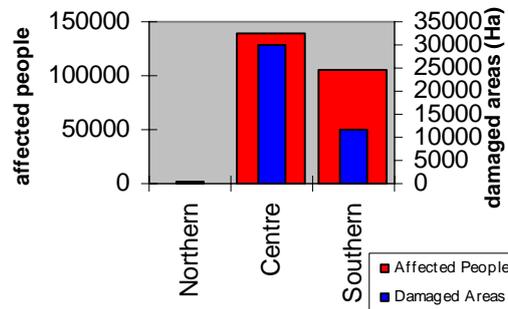
- 15 killed,
- 66,500 families or around 398,000 people were affected in 42 districts
- 197 irrigation schemes destroyed
- 42,000 hectares of agriculture crops affected.
- 50 million USD.



Disaster and the Impacts

Flood 2001:

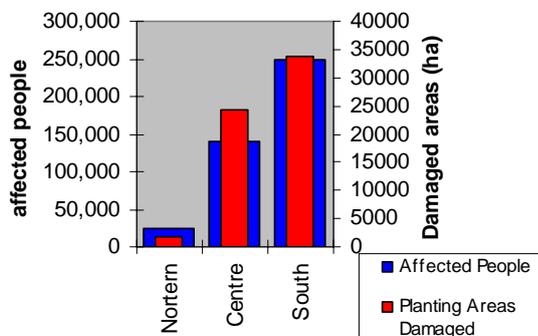
- 9 provinces were affected.
- 42,612 families or around 244,050 persons were affected.
- 42,223 hectares of 411,030 hectares in planting areas were damaged.



Disaster and the Impacts

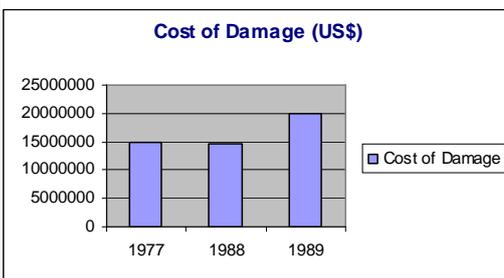
Flood 2002:

- 33,702 hectares of the 432,900 hectares planted to different crops were damaged.
- 3 killed.
- 249,782 people in 50,342 families were affected.



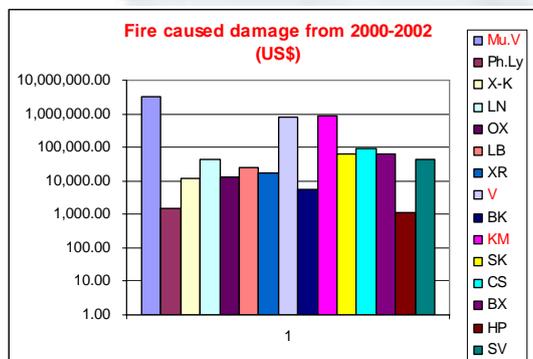
Disaster and the Impacts

- **Drought :**
 - The effects of drought particularly severe in 1977, 1988 and 1989.



Disaster and the Impacts

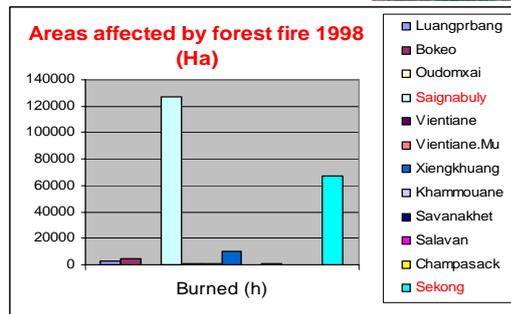
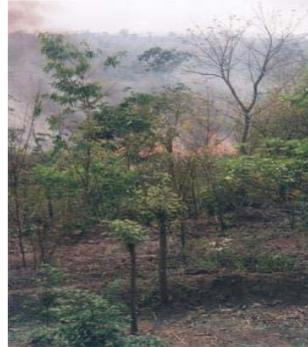
- **Fires: (urban)**
 - Other disasters include Fires that occur in some of the major cities and cause extensive damage due to the lack of sufficient fire fighting equipment
 - From 2000-2002, fire caused damaged of 5,402,695 USD.



Disaster and the Impacts

- **Fires: (forest)**

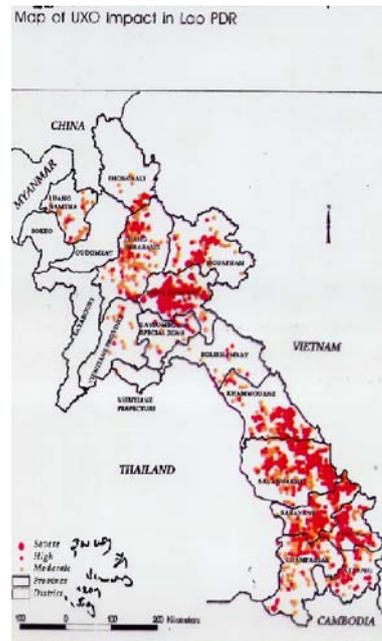
- Beside the urban fire, there is wild fires on forest sources cause from people activities, slash and burn for cultivation in upland and lowland.
- 134,995 hectares were burned by forest fire in 1998 in whole country.



Disaster and the Impacts

Unexploded Ordnance:

- **UXO is a legacy of the Indochina war in 1960's and early 1970's.**
- **More than 2 million tons of ordnance dropped over the Lao PDR.**
- **30% of this did not detonate on impact.**
- **2001, 35 people were killed and 87 people were injured by UXO.**



Why Lao PDR is Disaster Prone Country ?

The main problems to be consider on cause of disaster:

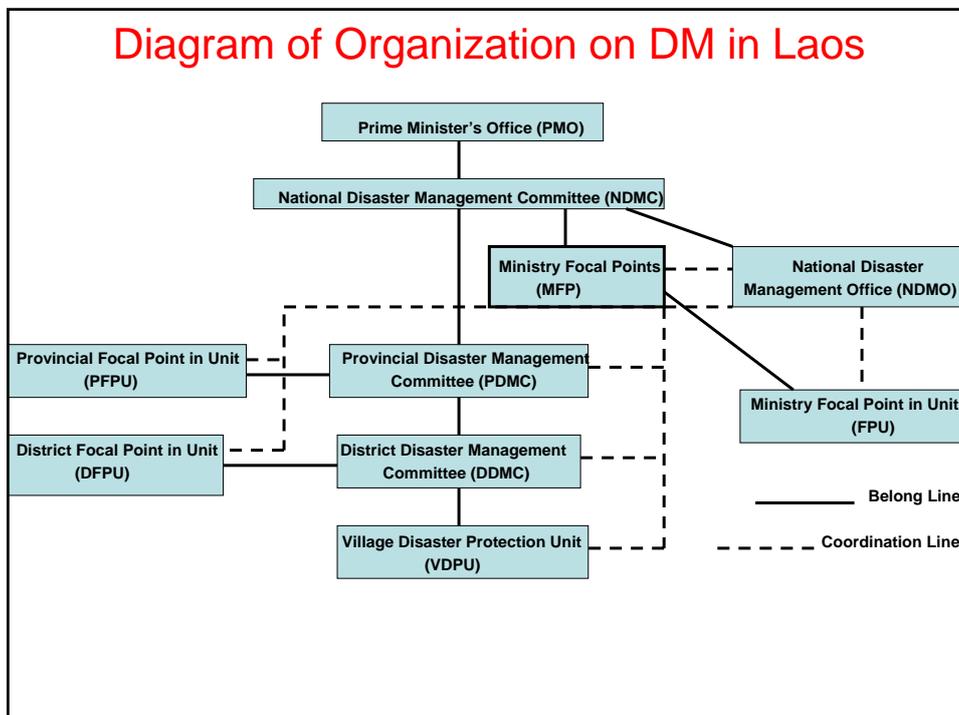
- Environment degradation and deforestation.
- Inappropriate development.
- Lack of Resources to Implement Strategic plans.
- Lack of equipment and sources.
- Lack of effective early warning and information management systems.

Disaster Management Organization In Lao PDR

Disaster Management Programs in Lao PDR

- After 1975, Activities of Govt.'s **Relief Programs.**
- 1993, coordinate relief and mitigation activities with NGO partners.
- In 1995, MLSW was established – Risk Management.
- After 1996 flood, an ad-hoc committee was set up – emergency response.
- Natural Disaster Preparedness as key rural development (CSN 1996-2000).
- Disaster and emergency relief to disaster preparedness.
- Within the MLSW, NDMO with supported of UNDP, took responsibility in 1997 for the **formulation of the Govt. policy on DM.**
- NDMC was established, Landmark Decree No. 158/PM., and NDMO functions as the secretariat of the NDMC.

Diagram of Organization on DM in Laos



National Disaster Management Committee

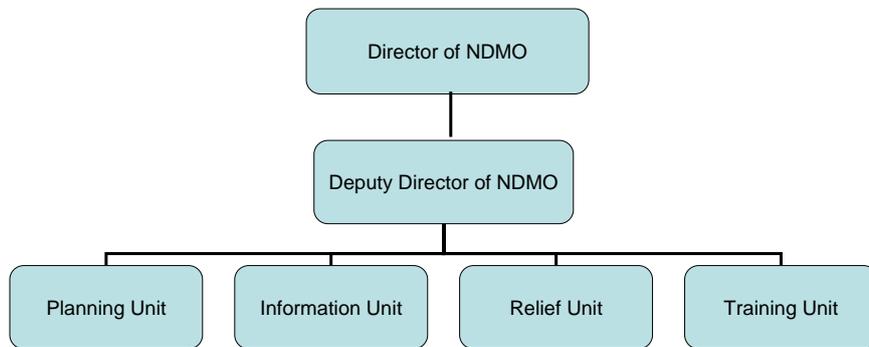
- The NDMC consisting of representative from 13 key ministries:

• Minister of MLSW	Chairman
• Vice-Minister of MAF	Vice-Chairman
• Chief of Cabinet of MFA	Vice-Chairman
• Chief of Cabinet of MOD	Member
• Chief of Cabinet of MOI	Member
• Chief of Cabinet of MOE	Member
• Director of Budget Dept. MOF	Member
• Director of Transport Dept. MCTPC	Member
• Director of Industry Dept. MIH	Member
• Director of Hygiene Dept. MOH	Member
• Director of Mass Media Dept. MIC	Member
• Director of Social Welfare Dept. MLSW	Member
• Chairman of Lao Red Cross	Member

Role of NDMC

- Implement policy and decision on inter-ministerial basis.
- Develop policies, national DM plan, provide overall direction for provincial and district plans.
- *Responsible for major operational decisions during emergency.*

NDMO Diagram



Role of NDMO

- Promoting disaster mitigation, preparedness activities at local level.
- Implementing public awareness activities (include projects).
- Providing training, guidelines and plans to make disaster risk management more effective.

National Disaster Management Plan

National Strategic Plan on disaster management is broken down into periods as:

- 2001 to 2005
- 2005 to 2010
- 2010 to 2020

Goals of NAP on DM 2003-2005

- Establish DDMC in 80% of total district.
- Establishment of focal point and identify contact person on DM.
- Organization of effective early warning systems.
- Organize 4 training courses on DM in each year.
- Establishment of rescue team and quick response team within Municipality and Provincial level by using of army, police, students and volunteer s at local level.
- Produce Natural Hazard Maps.

ありがとうございます



Kob Chai