



# Citizens and cities facing new hazards and threats

30<sup>th</sup> November to 4<sup>th</sup> December 2020

## **SESSION 5 : Natural hazards and climate change**

*Pradit Nulay*

# Community-based Landslide Watch Networks in Thailand

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# Contents

## 1) Introduction

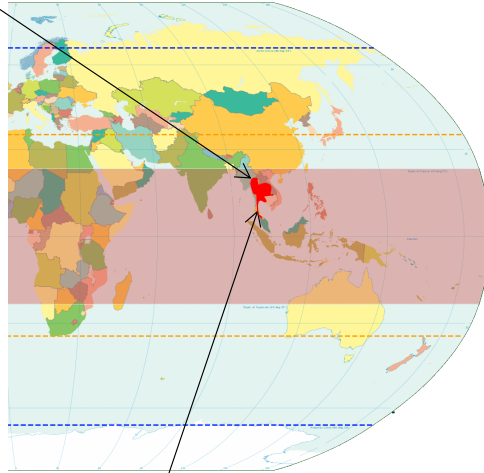
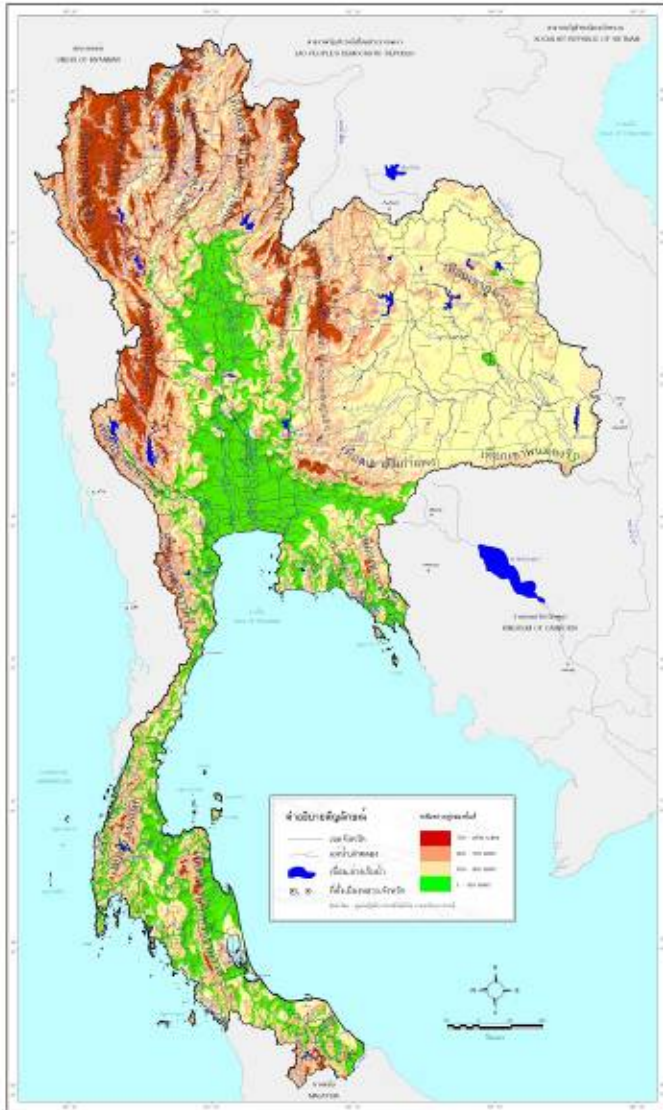
## 2) Landslide Hazard in Thailand

## 3) Landslide Watch Network in Thailand





แผนที่แสดงลักษณะทางกายภาพประเทศไทย



Thailand is tropical areas extending from 97<sup>0</sup>-106<sup>0</sup> East Longitude, and 5<sup>0</sup>-21<sup>0</sup> North Latitude **composed of 76 provinces**

### **Climate**

**Rainy** season start on May- October

**Cool** weather start on November- February,

**Summer** season start on February- April.

**Rainy** season have high rainfall, tend to be susceptible to landslide.

Mountain area are extent in northern part, along to western and southern, some part is extent in central and eastern part.



**Fang**  
**23 September 2011**  
**2 Casualties**

**Nampad**  
**9 September 2011**  
**5 Casualties**

**Uttaradit, Phae and Sukhothai**  
**22 May 2006**  
**83 Casualties**

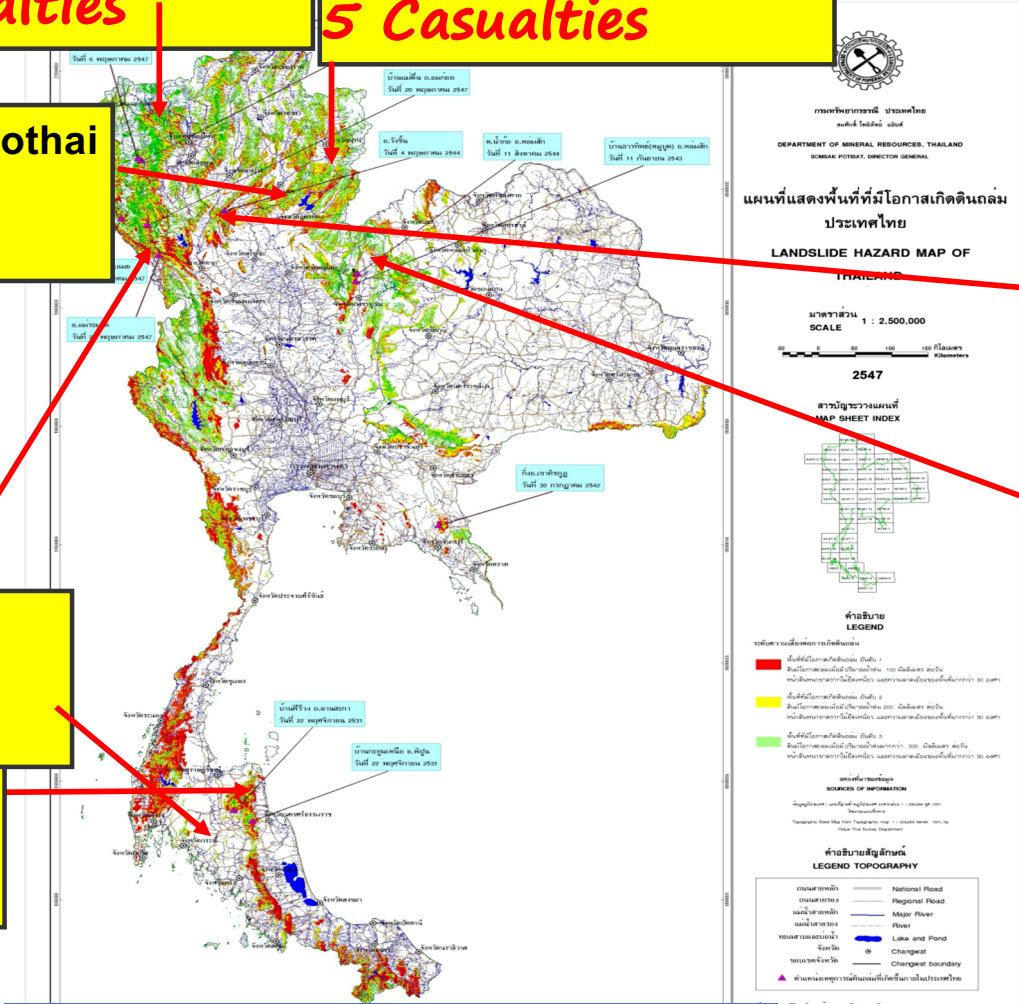
**Mae ramad**  
**20 May 2004**  
**5 Casualties**

**Krabi**  
**29 March 2011**  
**12 Casualties**

**Kelewang and Katoon,**  
**22 November 1988**  
**242 Casualties**

**Wangchin**  
**4 May 2001**  
**47 Casualties**

**Namko, Lomsak**  
**11 August 2001**  
**136 Casualties**



**Large Landslide Events**







## Main Cause of Landslide in Thailand

- ❖ **Heavy rainfall (average rainfall more than 100 mm/d)**
- ❖ **Steep Slope (Slope gradient is higher than 30 degree)**
- ❖ **Thickness layer of fine sediment layer on the slope**



**To cope with the landslide disaster in Thailand, DMR has conducted**

- 1. Landslide Hazard and Risk Mapping to identify the dangerous areas**
- 2. Landslide Watch Networks Training to minimize damages and how to prevent the disaster by themselves (Local People) since 2003.**

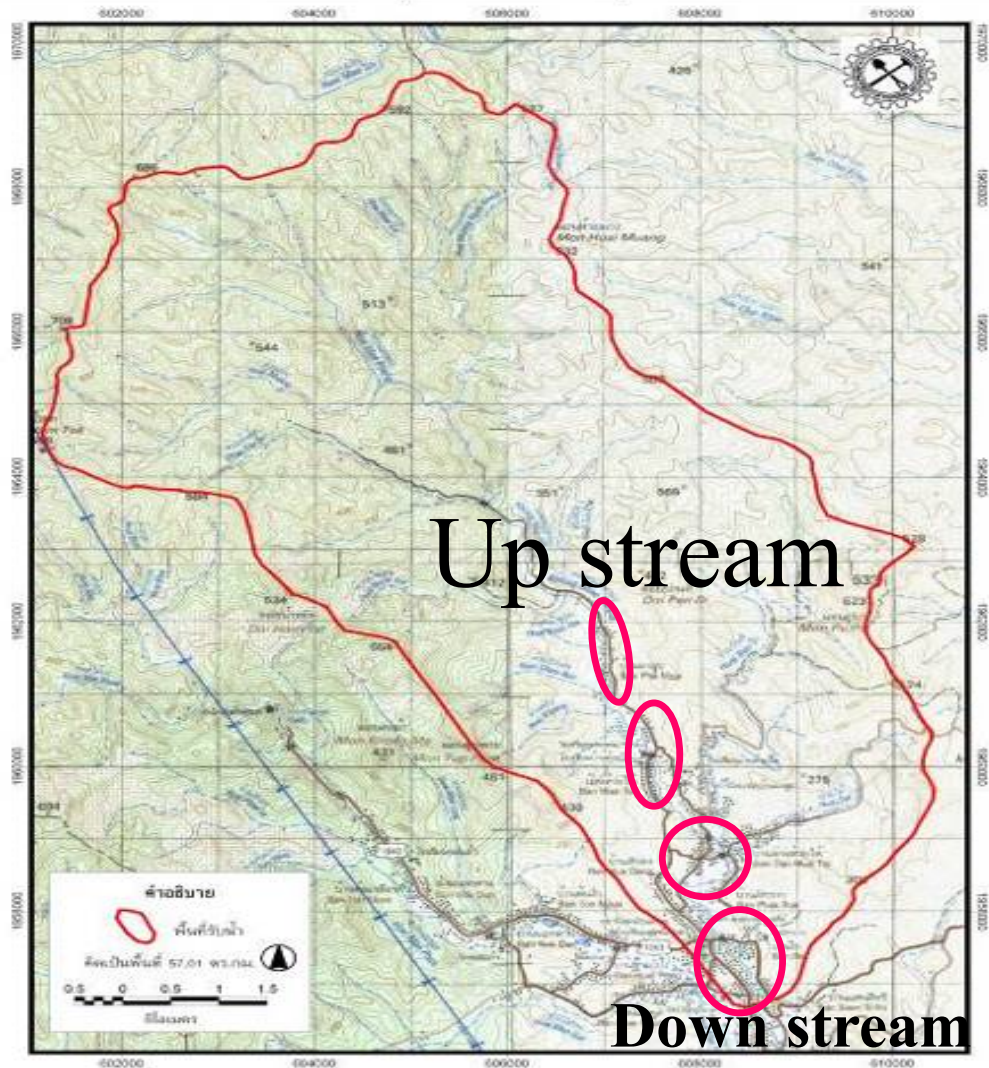
# **Landslide Watch Networks**

**Concept :** The local people can protect themselves (life) from landslide disaster.

**How to do :** Educate them to know about landslide (Causes, Impact, Landslide signs and how to observe it and warn the others to save their life)



## 2. Landslide Watch Networks Training



### Network Establishing

#### 2.1 Grouping risky villages

#### 2.2 Investigating risk houses



## 2.3 Have a meeting with a group of networks



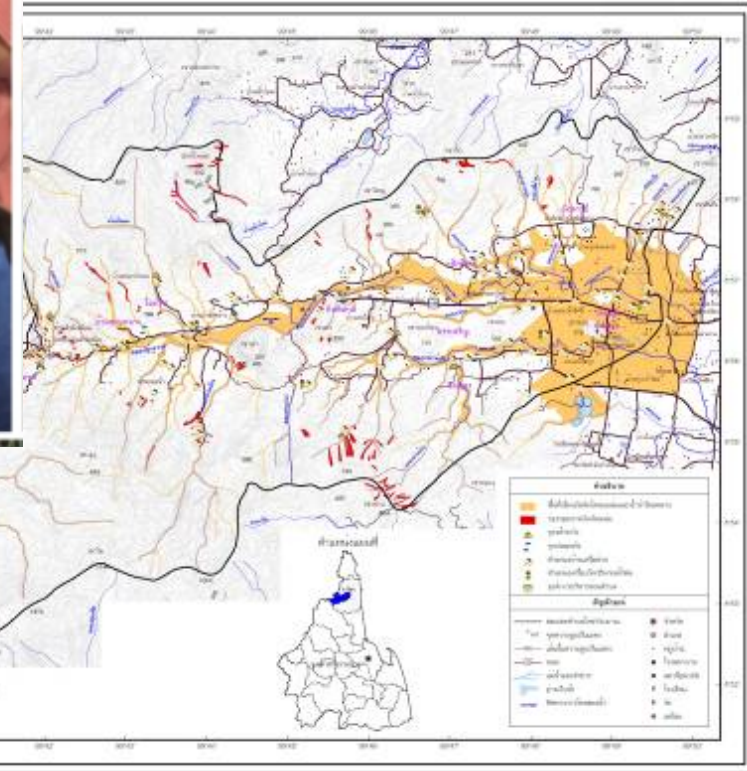
The expert transfer Geohazard knowledge to people



## 2.4 Discussion on landslide matter



## 2.5 Compiling their own early warning and evacuating plan



## 2.6 Installing simple rain gauges



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## 2.7 Search for appropriate observatory site and safety places

## 2.8 Installing Simple Benchmark



Close to observatory site



2.9 The networks will only be at the observatory site in the heavy rain night.



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## 2.10 Inform the head of village to warn the people in the village and others village in down stream .

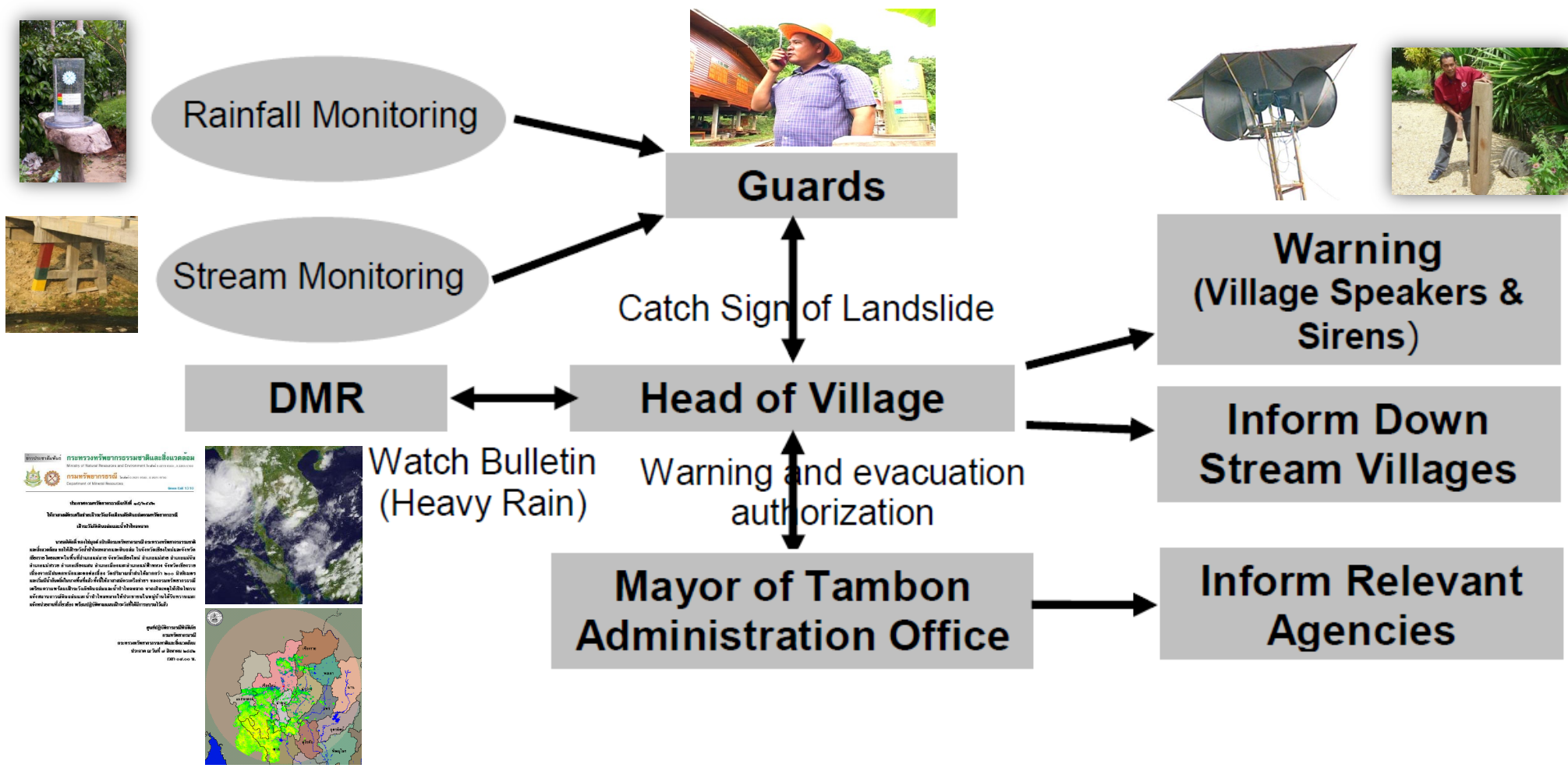


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## Statistic of Damage

Year	Areas	Casualties
<b>1988</b>	Nakhon Si Thammarat	<b>242</b>
<b>2001</b>	Phetchabun	<b>136</b>
<b>2006</b>	Uttaradit	<b>83</b>
<b>2011</b>	Krabi	<b>12</b>

Landslide Watch Networks Training was established in 2003

## Conclusion

