



## POLICY GUIDELINES ON DISASTER RISK REDUCTION FOR FLOOD PREVENTION

### AT KLONG YAN SUB-WATERSHED, SURATTHANI PROVINCE, THAILAND

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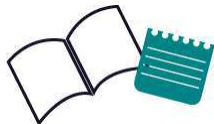
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## Outlines

Introduction



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Research Objectives

# Introduction

- Thailand is one of South-east Asian countries that have experienced from the impact of natural disaster.
- Floods still remain the top priority of severe disaster (Nakasu, 2017).

The number of losses and damages during 2011

Date	Type	Totals
2004-	Earthquake(Tsunami)	8,345
2011-Aug.5	Flood	813
1962-Oct.27	Storm	769
1988-	Flood	664
1955-Jun.	Earthquake	500
1989-Nov.3	Storm	458
2010-Oct.10	Flood	258
1975-Jan.3	Flood	239
1995-Aug.1	Flood	231
2006-	Flood	164

Date	Type	Total damage (000 USD)
2011-Aug.5	Flood	40,000,000
1993-Nov.27	Flood	1,261,000
2004-Dec.26	Earthquake	1,000,000
2013-Sep.30	Flood	482,000
1989-Nov.3	Storm	452,000
2005-Jan.	Drought	420,000
1993-Dec.	Flood	400,100
1984-Jan.19	Flood	400,000
1978-Aug.	Flood	400,000
2010-Oct.10	Flood	332,000

# Introduction

Surat Thani is one of province in the southern region of Thailand, facing with floods due to the impact of climate change. (Nakasu, 2017).

2011.03.27	Southern Provinces	Flash Flood	Since 23 March 2011 there has been a prolonged heavy rainfall causing flash floods in many provinces in the South.	ADRC		
2011.07-2012.02	Provinces of Northern, Northeastern and Central Thailand	Flood	Severe flooding occurred during the 2011 monsoon season in Thailand, beginning at the end of July and ceasing mid-January 2012. The floodline affected the provinces of Northern.	ADRC		
2014.	2016.06.21	Bangkok	Flood	Wide areas of Bangkok, Thailand, were flooded on 21 June after a period of heavy rain across the city. The flooding brought traffic to a standstill forced some schools and businesses to close. The Department of Disaster Prevention and Mitigation (DDPM) stated that heavy rains during the evening of 20 June caused flooding in 36 areas of Bangkok, leaving streets under 60cm of water in some areas.	Flood list	
2011.08.03	2014.					
2012.06.06	2014.					
2012.09.04	2014.	2016.09.06	Phang-Nga	Flood	The floods have affected areas of Phang Nga Province. The worst hit area is the village of Ban Bang Yai Village in Taku Pa District, where at least 40 houses have been damaged and left without drinking water. Vehicles, crops and livestock have also suffered damage. No injuries or fatalities have been reported however.	FloodList
2013.06	2014.					
2013.07.05	2014.	2016.10.07	Nakornsawan Province	Flood	3 people have been killed by floods in Nakornsawan province. Wide areas of farmland have been submerged and 27,000 houses inundated. Flooding is affecting a total of 14 provinces across the country. Many areas have been reported persistent heavy rain over the last 2 weeks. Ayutthaya province in particular is seeing some severe flooding, with around 22,000 homes inundated as well as a number of important historical buildings and temples.	FloodList
2013.07.18	2014.					
2013.08.01	2014.	2016.11.06-09	Kanchanaburi, Phetchaburi, Krabi and Satun	Flood	Thailand's Department of Disaster Prevention and Mitigation (DDPM) reported on 06 November that over 6,000 households have been affected by flooding in the central provinces	FloodList
2013.09.17	2014.	2016.12.05	Surat Thani, Nakhon Si Thammarat, Songkhla, Phatthalung, Pattani, Chumphon, Krabi, Trang, Yala, and Narathiwat	Flood	Thailand's Department of Disaster Prevention and Mitigation (DDPM) says that 11 people have died in the floods and 2 people remain missing. Over 360,000 people have been affected. Flooding has also caused major disruption to train travel in the south. The fatalities were reported in the provinces of Surat Thani (2), Nakhon Si Thammarat (3), Songkhla (2), Phatthalung (2), Pattani (2). Flooding has also affected the provinces of Chumphon, Krabi, Trang, Yala and Narathiwat.	FloodList
2013.11.26	2014.					

# Introduction

- In 2018, the Department of Disaster Prevention and Mitigation reported that there were approximately affected 80,267 households and economic damage was around 900 million Baht in Surat Thani Province (The Department of Disaster Prevention and Mitigation, 2018).
- the Klong Yan Sub-Watershed which is at Surat Thani Province was one of the severely affected areas (The Department of Disaster Prevention and Mitigation, 2018).

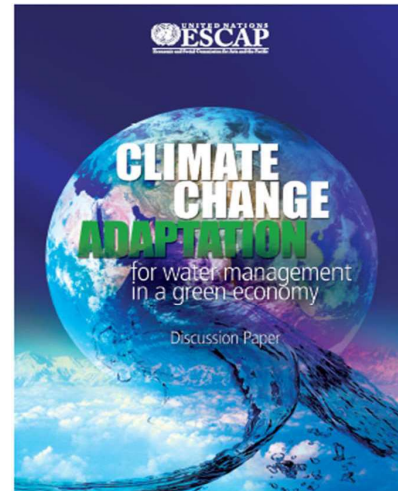
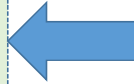
# Related literatures



- the rising of the average surface temperature was a result from human activity where greenhouse gas emissions is increasing into the atmosphere.
- It is likely projected to be increasing temperature on the earth's surface in the range from 2<sup>0</sup> C to 4.5 <sup>0</sup> C over the next 100 years.
- climate change is expected to dramatically impacts on environment, societies and economic activities in terms of natural disasters or extreme events.

## Related literatures

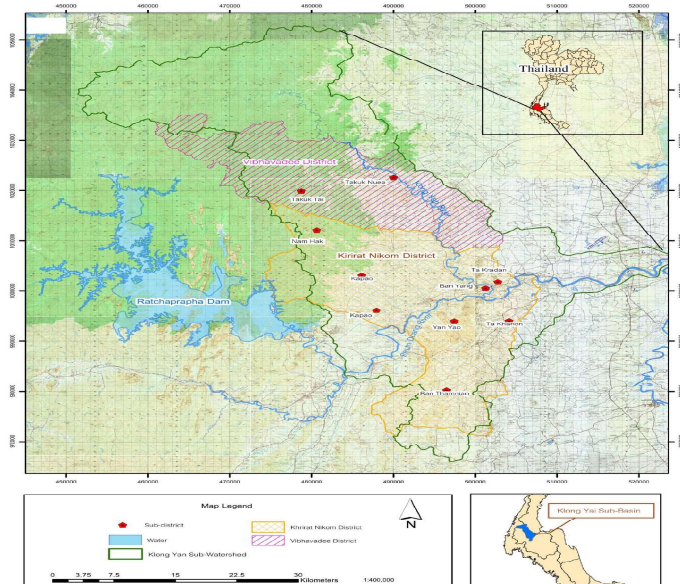
The urban expansion problems and increasing population led to unsuitable settlements in the floodplain land areas, making people vulnerable to the impact of flooding.



## Research objectives

To study the policy guideline on disaster risk reduction for flood prevention at Klong Yan Sub-Watershed, Surath Thani Province.

# Materials and methods



- Klong Yan Sub-Watershed is located in Surat Thani and Ranong Provinces covering 6 districts, including Kirirat Nikom District, Vibhavadee District, Ta Chang District, Ban Ta Khun District, Kaper District and Chai Ya District .
- The study was Vibhavadee District and Kirirat Nikom District because these areas were the most affected areas from flood in Klong Yan Sub- Watershed (The Department of Disaster Prevention and Mitigation, 2018).

# Materials and methods

## Data collection

### *1)Desk study*

- International and national journal articles, academic reports, and researches on effects of climate change, disaster risk reduction
  - Current policies such as the National Disaster Prevention and Mitigation Plan 2015
- 2) Field visits were at the Klong Yan Sub-Watershed.

### *3) In-depth interview*

- The purposive sampling method was used to select stakeholder's involvement, which included local governmental officers, local community leaders, non-profit organization, local wisdom scholars and the network groups.
- A semi-structured questionnaire was conducted by the interviews 29 respondents as representatives of stakeholder's involvement.

## Data analysis

- data were analyzed through the policy guidelines on disaster risk reduction by using descriptive analysis method.

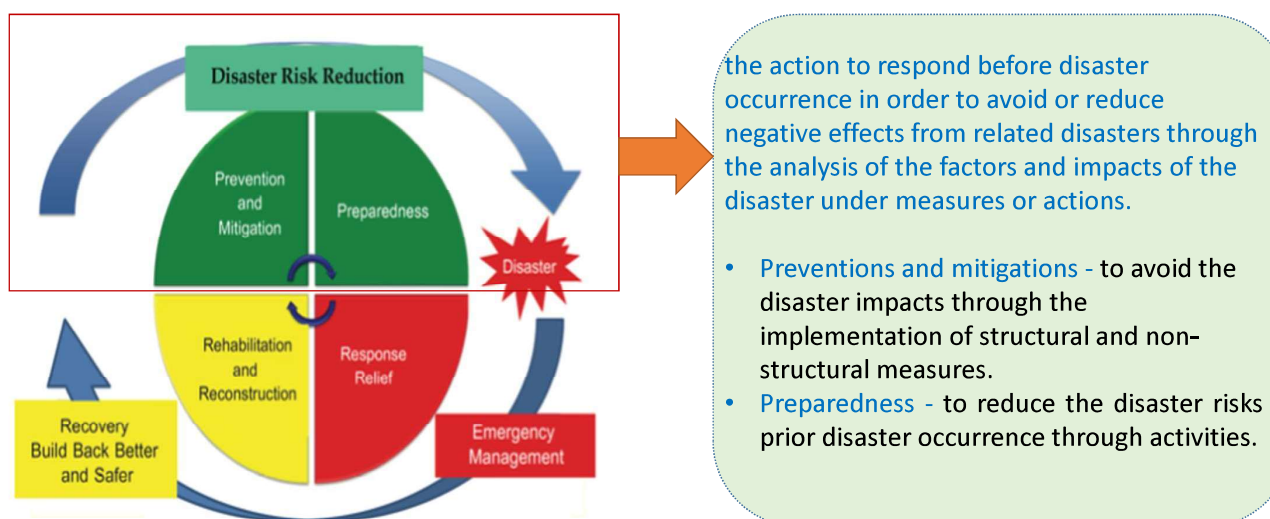


# Results and discussions

## The National Disaster Prevention and Mitigation 2015



# Results and discussions



## Results and discussion

### **The policy guidelines on disaster risk reduction**

31.03 % of the respondents knew about policy guidelines on disaster risk reduction.

- the community planning with multiple sectors such as governmental sectors, private sectors, and the network groups through knowledge and training activities.
- the ways to practice pre-disaster steps, during-disaster steps and post-disaster steps in order to decrease the disaster risks.
- the access information for planning – before, during and after disaster.
- measures to lay down for disaster risk reduction.

## Results and discussion

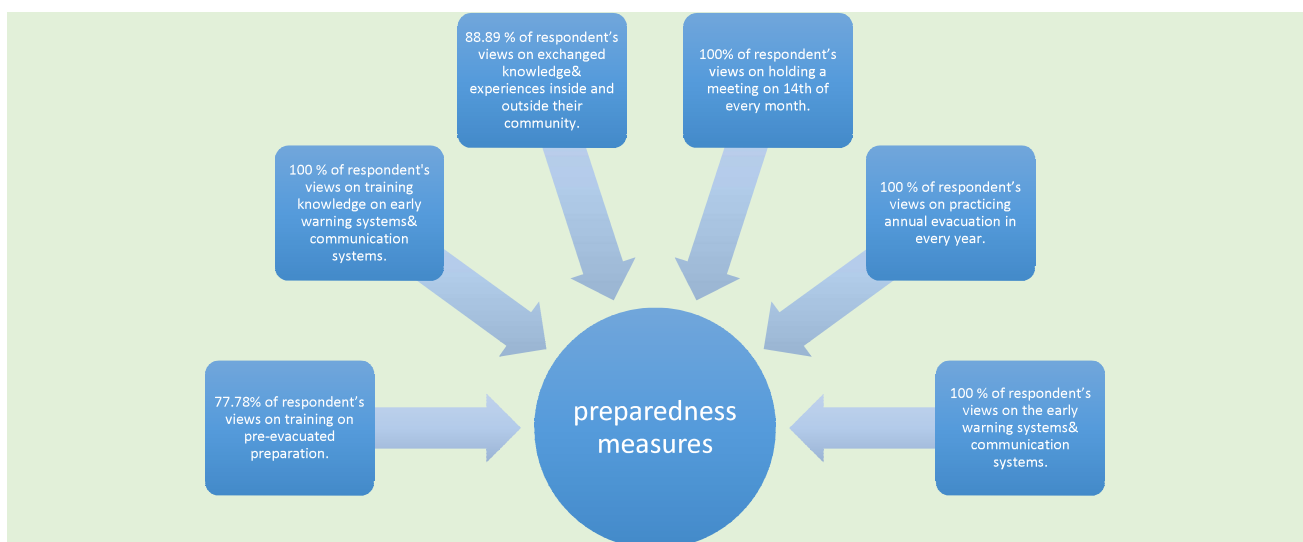
### **The importance of the policy guidelines on disaster risk reduction**

- preventing and coping with the disaster impacts in a long term.
- the reduction of losses and damages from the disasters.
- ensuring the people in the communities to be ready to cope with the upcoming disasters.
- response and recover the managing of the remaining disaster risk.
- the communities with well-timed disaster preparedness and capacity building on disasters.

## The measures for disaster risk reduction in the community.



## The measures for disaster risk reduction in the community.





# Results and discussion

## The respondent's experience in handing flooding problems

69 % of the respondents were not familiar with the policy guidelines on disaster risk reduction. They viewed that policy implement requires as follow:

- Encouraging knowledge through preparedness training.
- Raising awareness and perception on the adverse impacts of disaster.
- Supporting awareness on environment and forest conservation.
- Practicing yearly evacuation plan
- Setting the network group for disaster warning in the communities.
- following up-to-date news and information from the government offices.
- Exchanging new knowledge with other communities
- Building check dams
- Setting early warning systems with certainty.
- Supporting funds and finance allocations.
- Avoiding any constructions along the river and flooding areas.

## Conclusions

31 % of the respondents

- the communities with well-disaster preparedness
- capacity building on disaster management
- the reduction of losses and damages from the impact of disaster



69 % of the respondents

- knowledge training
- awareness raising
- law and regulations
- water-related infrastructures
- financial support
- communication systems and early warning systems
- the creation of the network groups



**Thank you for your kind attention**

