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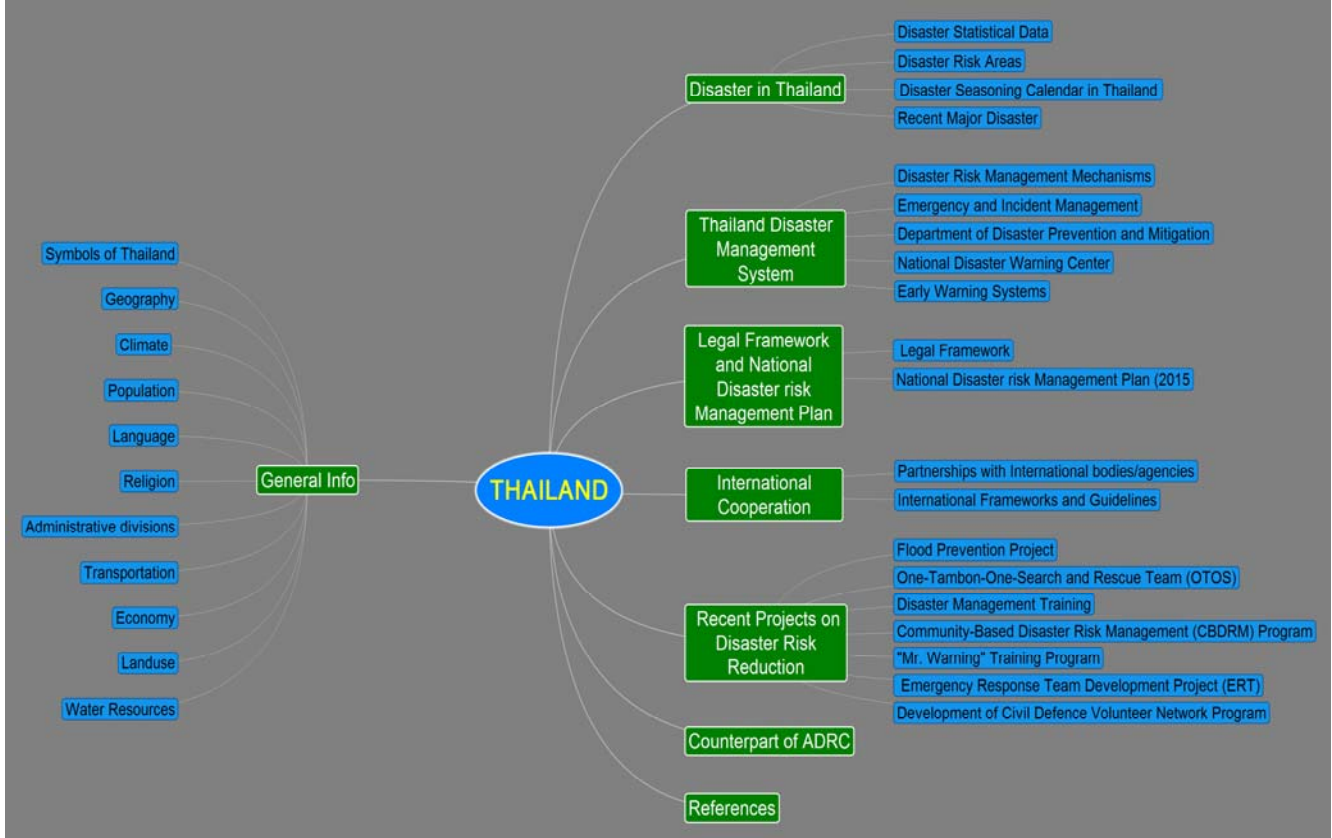
# Thailand country Report

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VR2016B

Department of Disaster  
Prevention and  
Mitigation

# THAILAND

# Overview



## General Info

- Symbols of Thailand
- Geography
- Climate
- Population
- Language
- Religion
- Administrative divisions
- Transportation
- Economy
- Land use
- Water Resources

# Symbols of Thailand

	Symbol	Image	Notes
Coat of arms	Emblem of Thailand		<a href="#">↗</a>
Flag	Flag of Thailand		<a href="#">↗</a>
National animal	Thai elephant ( <i>Elephas maximus</i> )		<a href="#">↗</a>
National flower	Ratchaphruek or the Pudding Piper Tree or the Indian Laburnum ( <i>Cassia fistula</i> Linn)		<a href="#">↗</a>
National Architecture	Sala Thai		<a href="#">↗</a>

# Geography



- land area of 513,120 sq.km
- coastline stretches for 3,219 km
- The highest point in Thailand is Doi Inthanon, at 2,565 meters (8,415 feet)
- The lowest point is the Gulf of Thailand, at sea level

# Climate

- 3 seasons
- Hot (March-May)
- Rain with plenty of sunshine (June-September)
- Cool (October-February).
- Temperature during the time of the Congress is approximately 28°C (80°F)

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# Population

- Population Total 65,729,098 (in 2016),
- 32.2 million males
- 33.4 million females

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## Language

- People 75% Thai
- 11% Chinese
- 3.5% Malays
- Others are Mons, Khmers, Burmese, Laotians, Indians and a variety of hill tribes

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## Religion

- Buddhist (official) 93.6%,
- Muslim 4.9%,
- Christian 1.2%,
- Other 0.2%,
- None 0.1%

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# Administrative divisions

- Thailand is a constitutional monarchy under the beloved king,
- King PHUMIPHON Adunyadet passed away in October 2016 after 70 years on the throne;
- King WACHIRALONGKON Bodinthathepphayawarangkun, ascended the throne in December 2016.
- Thailand's current Prime Minister is Gen. PRAYUT Chan-ocha, was appointed prime minister in August 2014
- The country comprises 76 provinces (changwat, singular and plural) and 1 municipality\* (maha nakhon)

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# Transportation



- Rail transport
- Road transport
- Air transport
- Water transport



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# Economy

- Agriculture - products: rice, cassava (manioc, tapioca), rubber, corn, sugarcane, coconuts, palm oil, pineapple, livestock, fish products



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# Economy

- Industries: textiles and garments, agricultural processing, beverages, tobacco, cement, light manufacturing such as jewelry and electric appliances, computers and parts, integrated circuits, furniture, plastics, automobiles and automotive parts, agricultural

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# Economy

- tourism



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# Economy

- tourism



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# Economy

- tourism



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# Land use

- agricultural land: 41.2%
- arable land 30.8%
- permanent crops 8.8%
- permanent pasture 1.6%
- forest: 37.2%
- other: 21.6%

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# Water Resources

- Thailand can be divided into 25 river basins.
- The average of annual rainfall for the country is about 1,700 mm.
- The total annual rainfall of all river basins is about 800,000 million m<sup>3</sup> of which 75 % of the amount is lost through evaporation, evatranspiration and the remaining 25 % (200,000 million m<sup>3</sup>) is in streams rivers, and reservoirs
- Thus, the available water quantity was about 3,300 m<sup>3</sup>/ capita/year

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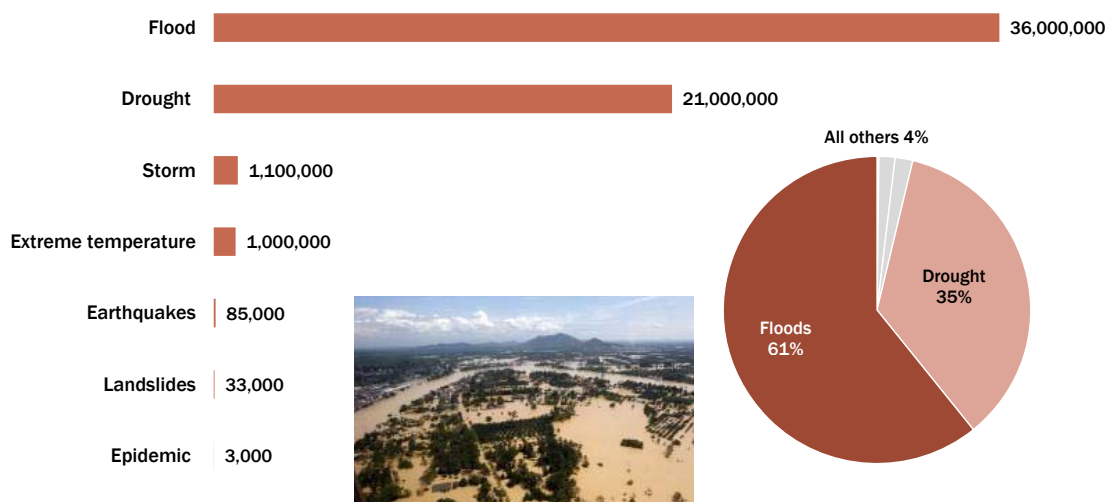
# Disaster in Thailand

- Disaster Statistical Data
- Disaster Risk Areas
- Disaster Seasoning Calendar in Thailand
- Recent Major Disaster

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# Disaster Statistical Data

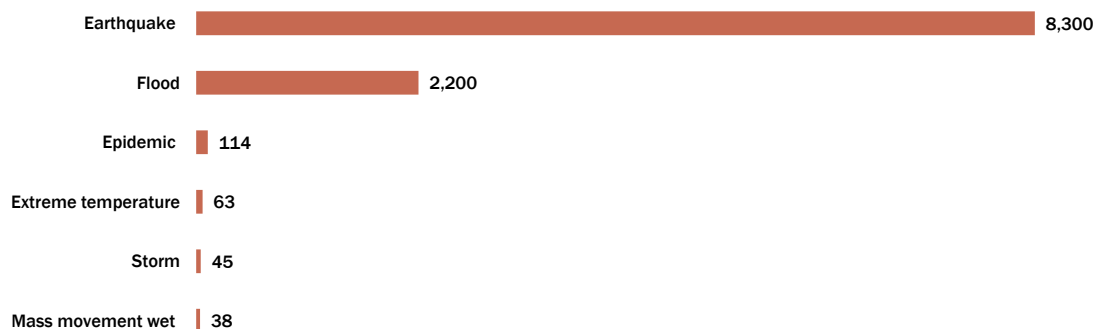
## Types of disasters affecting Thailand (number of people affected by disaster type 2004-2015)



Data source: EMDAT-CRED

# Disaster Statistical Data

## Types of disasters affecting Thailand (number of people killed by disaster type 2004-2015)

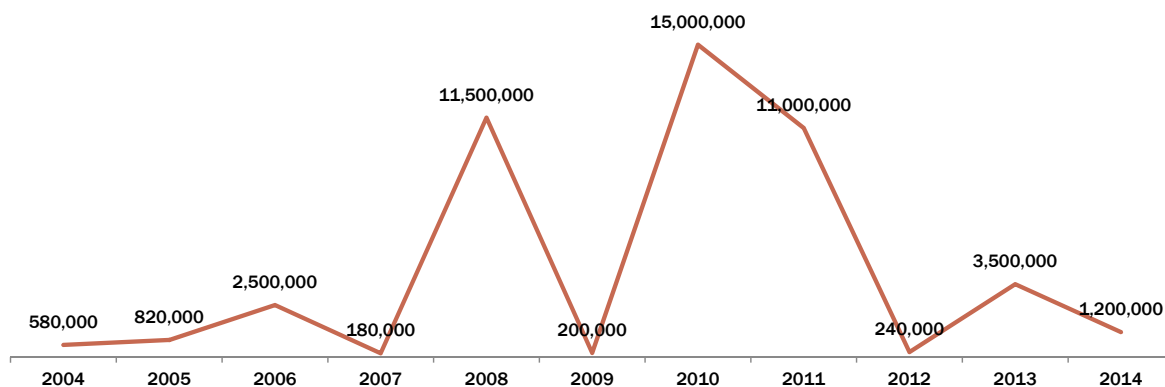


Not including the huge number of people killed by the Indian Ocean Tsunami in 2004, floods are responsible for the most deaths of any type of disaster.

Data source: EMDAT-CRED

# Thailand: Disaster Profile

number of people affected by year 2004-2015



The number of people affected by disaster is erratic. In some years relatively few people are affected, but in some years, drought (2008, 2010) and floods (2010, 2011) can affect millions of people. The floods in 2011 affected 16% of the entire population.

Data source: EMDAT-CRED

# Thailand: Disaster Profile

## Key points

- Thailand is exposed to a variety of hazards, but the ones affecting the most amount of people are drought and floods
- Disasters in Thailand are unpredictable. Although seasonal flooding occurs every year, some years are far worse than others.



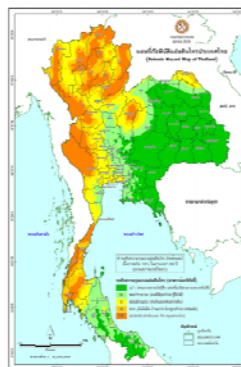
# Disaster Risk Areas



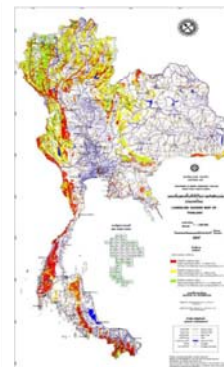
Flood Hazard Map



Drought Hazard Map



Seismic Hazard Map



Landslide Hazard Map

# Recent Major Disaster

- 2017: Flood in the Southern of Thailand.



# Recent Major Disaster

- 2011: Widespread flooding



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# Recent Major Disaster

- December 2004: The Indian Ocean Tsunami.



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# Thailand Disaster Management System

- Disaster Risk Management Mechanisms
- Emergency and Incident Management
- Department of Disaster Prevention and Mitigation
- National Disaster Warning Center
- Early Warning Systems

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## Disaster Risk Management Mechanisms

At Policy Level

- National Disaster Prevention and Mitigation committee
- National Safety Council

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# Disaster Risk Management Mechanisms

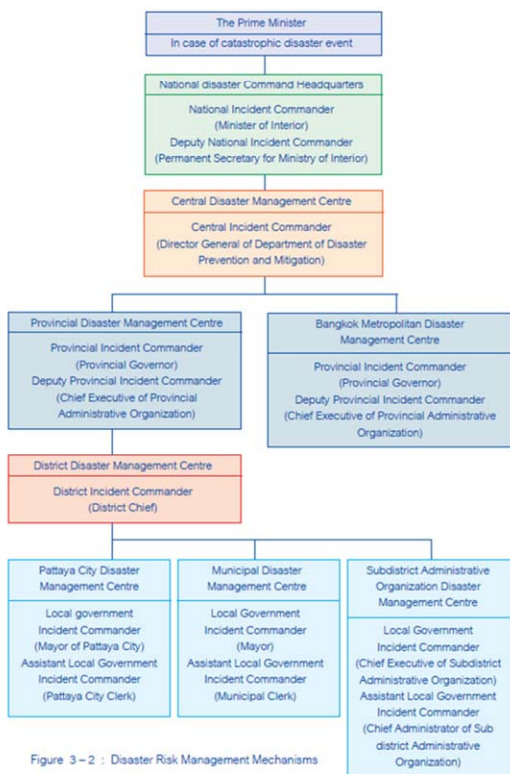


Figure 3 – 2 : Disaster Risk Management Mechanisms

## At Operational Level

- National Disaster Command Headquarters
- Disaster Management Centre
- Provincial Disaster Management Centre
- Bangkok Metropolitan Disaster Management Centre
- District Disaster Management Centre
- Pattaya City Disaster Management Centre
- Municipal Disaster Management Centre
- Subdistrict Administrative Organization Disaster Management Centre

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# Emergency and Incident Management

- An emergency and incident management in Thai context is classified into four levels based on a wide range of parameters

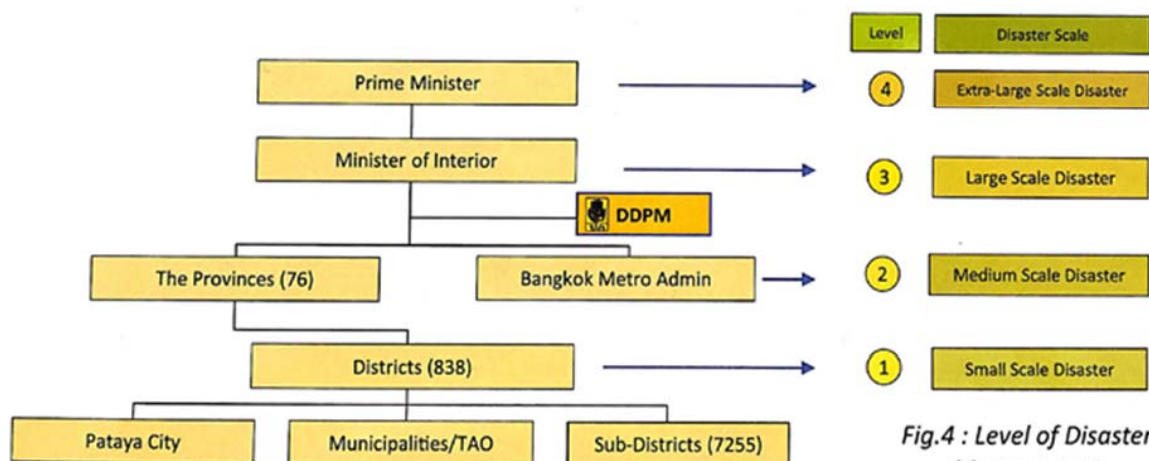
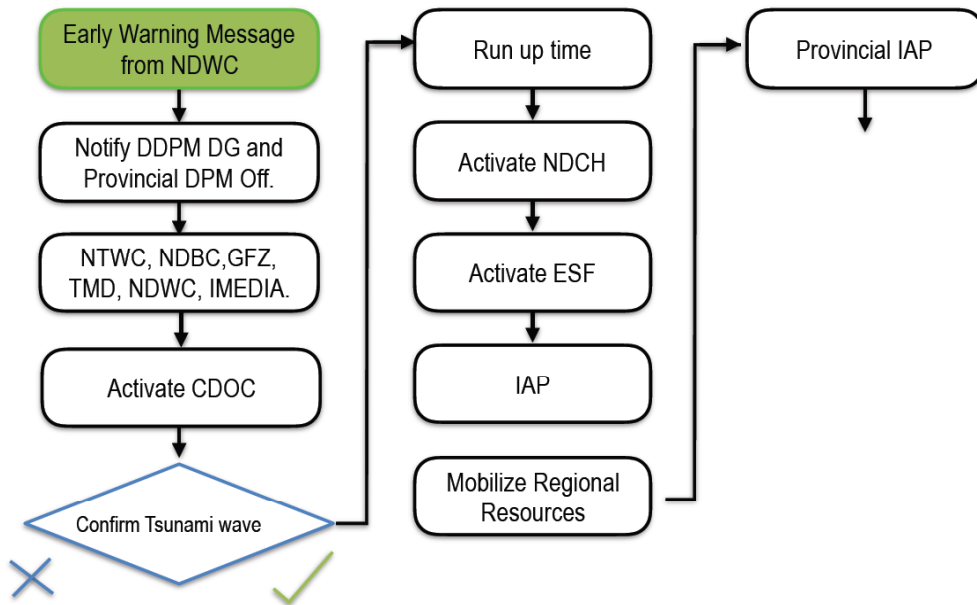


Fig.4 : Level of Disaster Management

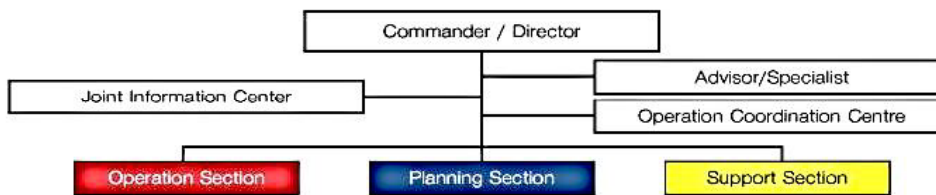
Fig.3 : Organization Chart of Implementation Body

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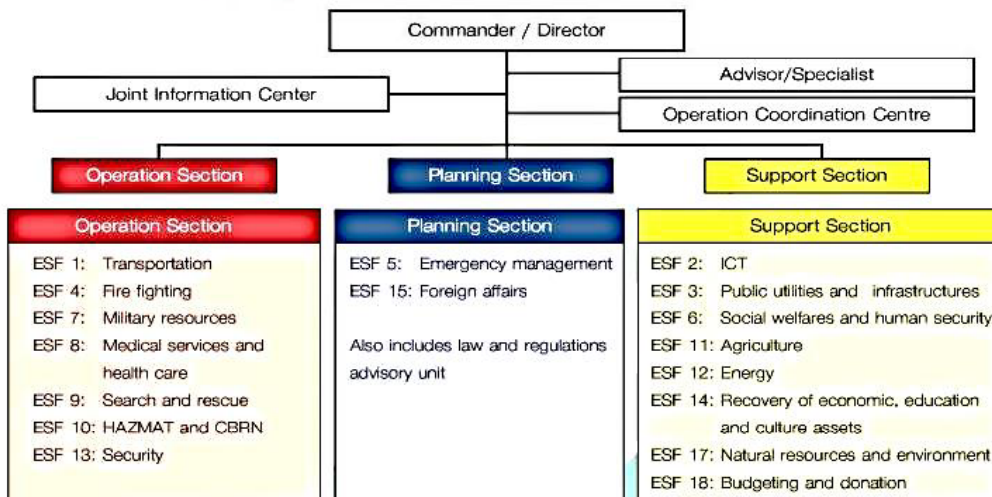
# DDPM SOPs



## Organizational Structure of National Emergency Operation Headquarter/Incident Command Centre



## Emergency Support Functions (ESF)



# Emergency management tools: Emergency support function (ESF)



**ESF 1: Transportation**



**ESF 2: ICT**



**ESF 3: Public  
Utilities &  
Infrastructure**



**ESF 4: Fire fighting**



**ESF 5: Emergency  
Management**



**ESF 6: Social Welfare  
and human security**

# Emergency management tools: Emergency support function (ESF)



**ESF 7: Military  
Resources**



**ESF 8: Medical Service  
and Health care**



**ESF 9: Search and  
Rescue**



**ESF 10: HAZMAT  
and CBRN**



**ESF 11: Agriculture**



**ESF 12: Energy**

# Emergency management tools: Emergency support function (ESF)



**ESF 13: Security**



**ESF 14: Recovery of economic, education, & culture assets**



**ESF 15: Foreign Affairs**



**ESF 16: Public Relations and Information Management**



**ESF 17: Natural Resources and environment**

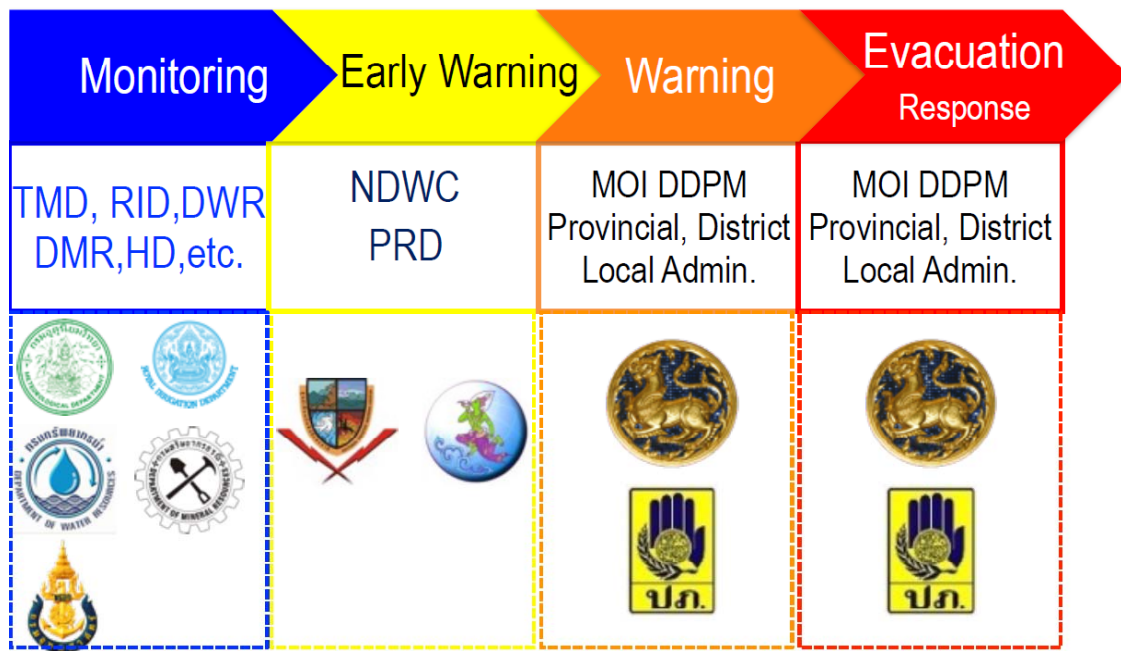


**ESF 18: Budgeting and donations**

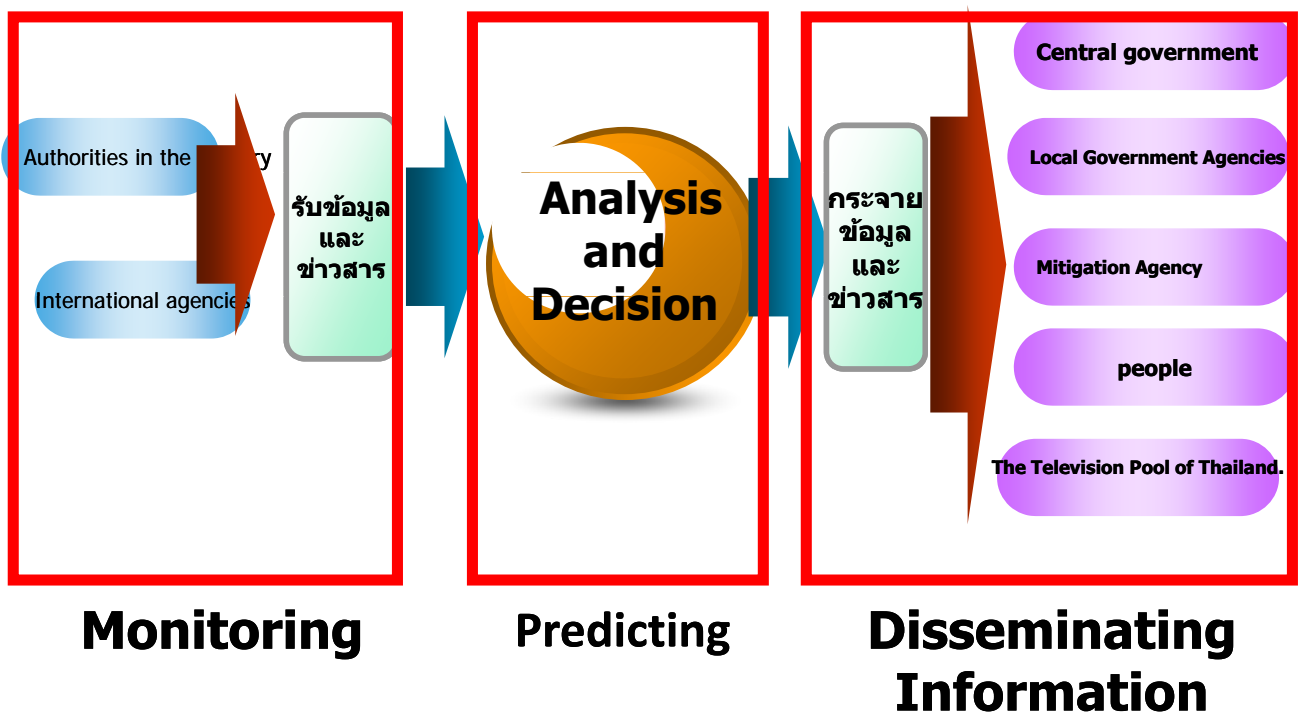
## Early Warning Systems

- Red : associated with colors are denotes the situation where the likelihood of hazardous event is most imminent. It is recommended to remain or stay in completely safe place and follow the advice or instruction of the authorities
- Orange : denotes the situation where the likelihood of hazardous is imminent. The government officials are attempting to bring emergency situation under control. Take immediate action to evacuate to designated safety place and follow the guidelines set fort
- Yellow : denotes the situation where there has been an increased likelihood of hazardous event. It is advised to be prepared to cope with potential disaster and to conform to the current advice
- Blue : denotes the situation where an activation of disaster surveillance system is needed. Take all required steps to closely keep track of disaster information on a 24 hour basis
- Green : denotes non – emergency situation. It is advised to keep track of relevant information on a regular basis

# Warning System



# Warning Process



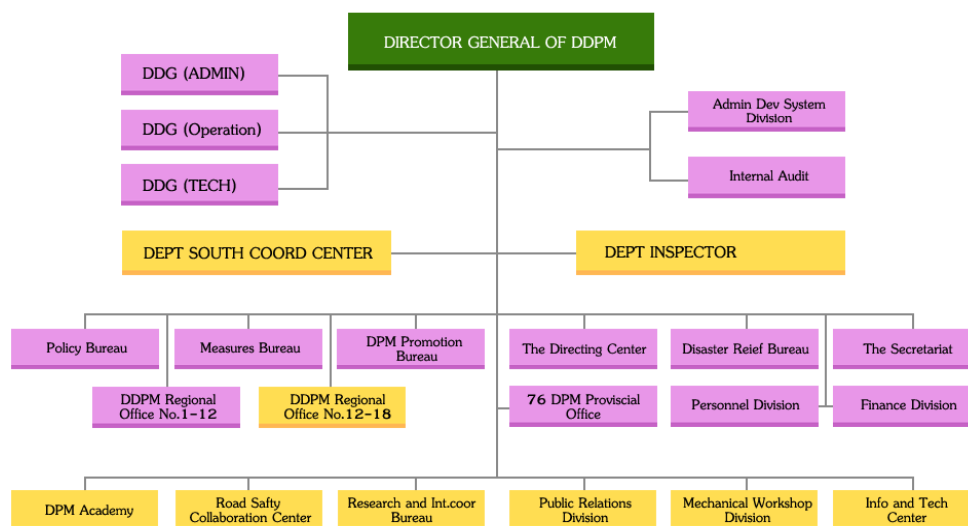
# Department of Disaster Prevention and Mitigation (DDPM)

- Pursuant to the 2002 Government Reform Act, DDPM was established on 9 October 2002 as a department under the Ministry of Interior (MOI)
- Core agency: DDPM as the central government agency to operate any related activities on national disaster prevention and mitigation

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# Department of Disaster Prevention and Mitigation (DDPM)

- As of January 2016 DDPM has 4,578 staff member working in HQ, Regional Centers and provincial offices nationwide.



HQ: 5 BUREAUS, 3 DIV, 2 GROUP, 12 CENTERS,(INT) 6 CENTERS PROV. 76 PROVINCES

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# National Disaster Warning Center

- The National Disaster Warning Center was established under the Order of the Office of the Prime Minister and then transferred to be under of the Ministry of Information and Communication Technology.
- Now, NDWC had transferred to a part of the Department of Disaster Prevention and Mitigation.

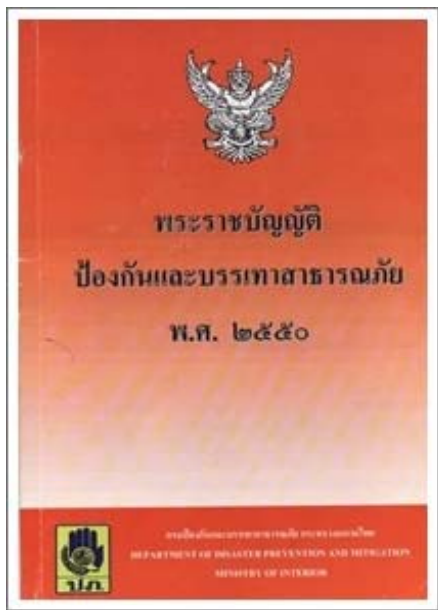
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## Legal Framework and National Disaster risk Management Plan

- Legal Framework
- National Disaster risk Management Plan (2015)

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# Disaster prevention and mitigation act 2007 (b.E.2550)



- Entry into force on 6 Nov 2007
- Authorize DDPM as the Central Agency responsible for Disaster Management
- Mandate DDPM to formulate the National Plan

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# National Disaster prevention and mitigation plan 2015



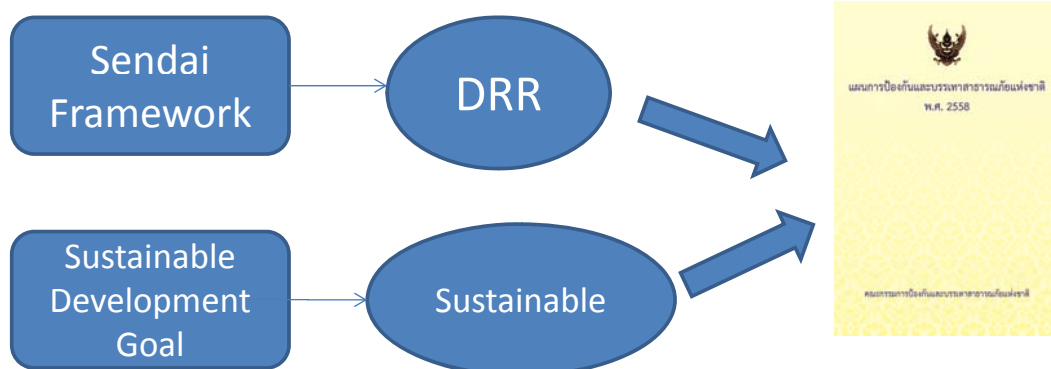
- Principle plan for national disaster management aimed to minimize disaster risks and losses of live and properties of people and State property
- Approved by National Disaster Prevention and Mitigation Committee
- The Cabinet on 31 March 2015 endorsed the National Disaster Prevention and Mitigation Plan mandating all parties concerned to fully support and implement the plan.

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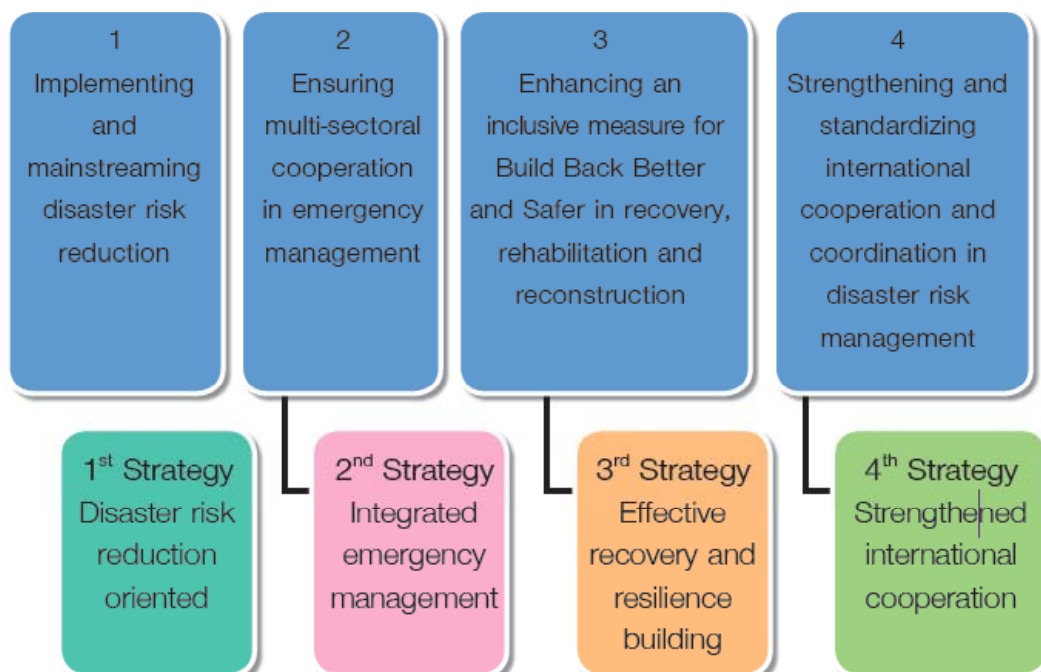


# Thailand national disaster prevention and mitigation plan 2015

- Participatory Process
- From “disaster management” to “disaster risk management”
- Concept of Operation: Framework and providing guidelines
- Sendai Framework for Disaster Risk Reduction 2015
- Toward building “resilience”



## National policy framework



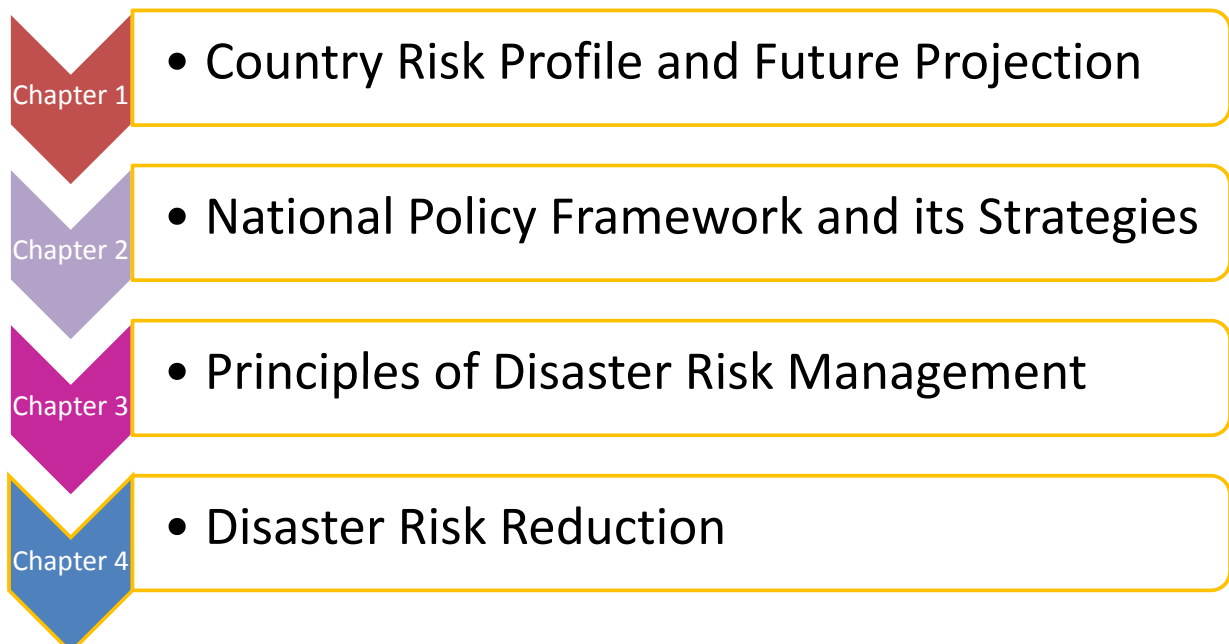
# Thailand national disaster prevention and mitigation plan 2015

- 3 Goals, 4 Strategies

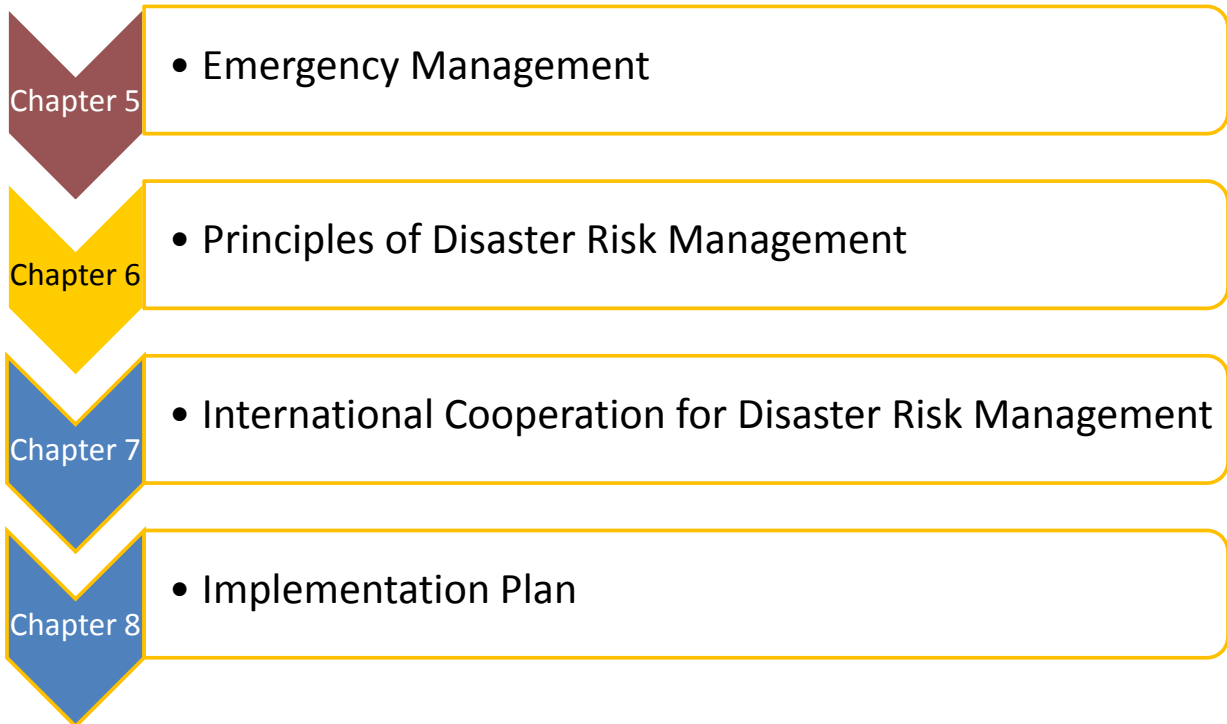


# Thailand national disaster prevention and mitigation plan 2015

– 8 Chapters

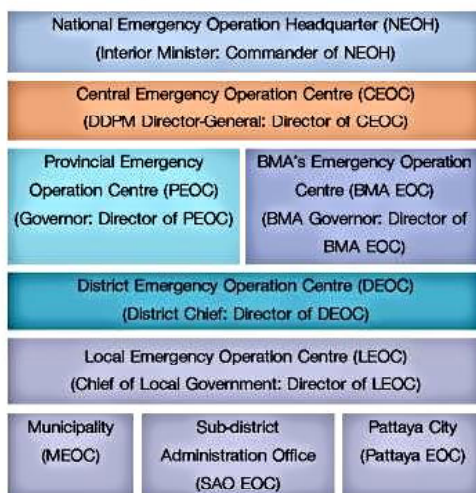


# Thailand national disaster prevention and mitigation plan 2015



# Thailand national disaster prevention and mitigation plan 2015

## Operational level



- Different level of mechanisms during disaster will be activated according to the level of emergencies

## Disaster Management Scale

Level	Management scale	Authority in charge
1	Small scale disaster	District Director, Local Director and/or BMA Assistant Director controls and controls
2	Medium scale disaster	Provincial Director or BMA Director controls, directs and commands
3	Large scale disaster	Commander of National Emergency Operation Headquarter controls, directs and commands
4	Extremely large scale disaster	Prime Minister or assigned Deputy Prime Minister controls, directs and commands

# Thailand national disaster prevention and mitigation plan 2015

- Emergency Support Functions (ESF): 18 ESFs will be established to provide support by function to the decision maker during the emergencies.
- The concept of “Build Back Better and Safer” is corporate within the plan
- The plan indicates roles and responsibilities of each organization involve in disaster management and coordination structure
- Implementation: DDPM provides guideline for each agencies in crafting their own action plan which in accordance with the national plan

## International Cooperation

- Partnerships with International bodies/agencies
- International Frameworks and Guidelines

# Partnerships with International bodies/agencies

1. The ASEAN Committee on Disaster Management (ACDM) and ACDM Working Groups.
2. Asian Disaster Reduction Center (ADRC)
3. Asian Disaster Preparedness Centre (ADPC)
4. The Typhoon Committee (TC)'s Working Group on Disaster Risk Reduction
5. APEC's Emergency Preparedness Working Group (EPWG)
6. ASEAN Regional Forum (ARF)
7. Japan International Cooperation Agency (JICA), Japan
8. USAID & USFS
9. GIZ

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# International Frameworks and Guidelines

1. The ASEAN Agreement on Disaster Management and Emergency Response (AADMER) and the AADMER Work Programme 2016 - 2020
2. The ASEAN Declaration on One ASEAN One Response (OAOR)
3. The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015 – 2030
4. Bangkok Declaration on Disaster Risk Reduction (The outcome of the 6th AMCDRR)
5. UNDAC/INSARAG Guidelines (UN-OCHA)
6. APC MADRO (UN-OCHA)
7. ASEAN SASOP and ERAT Guidelines (AHA Centre)
8. East Asia Summit (EAS) Disaster Management Tool Kits
9. IFRC's Guideline for International Disaster Relief Laws

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# Thailand and ASEAN on Disaster Management



- Thailand as one of the active member of ASEAN
- DDPM as the National Focal Point on disaster management in ASEAN
- ASEAN Agreement on Disaster Management and Emergency Response (AADMER)

## ASEAN Tools and mechanisms on disaster management

To operationalize AADMER, ASEAN also established ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre)



*The AHA Centre shall be established for the purpose of facilitating co-operation and co-ordination among the parties, and with relevant United Nations and international organisations, in promoting regional collaboration (AADMER article 20.1 and Agreement on the establishment of AHA Centre Article 3.1)*

*The AHA Centre shall work on the basis that the Party will act first to manage and respond to disasters. In the event that the Party requires assistance to cope with such situation, in addition to direct request to any Assisting Entity, it may seek assistance from the AHA Centre to facilitate such request (AADMER article 20.2 Agreement on the establishment of AHA Centre Article 3.2)*

- ASEAN Coordinating Centre for Humanitarian Assistance on disaster management: AHA Centre
- Established in November 2012
- Located in Jakarta, Indonesia

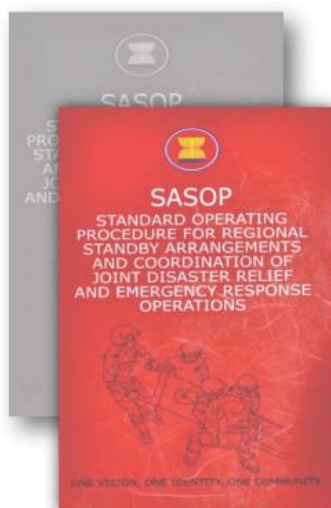
# ASEAN Committee on Disaster Management: ACDM

The ASEAN Committee on Disaster Management (ACDM) is the founding fathers of AHA Centre and serves as the Governing Board of the AHA Centre



## Standard Operating procedure

AADMER also requires the development of an effective Standard Operating Procedure for Regional Standby Arrangements and coordination of joint disaster relief and emergency response operation (SASOP)



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Guides and templates to initiate the establishment of the ASEAN Standby Arrangements for Disaster Relief and Emergency Response

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Procedures for joint disaster relief and emergency response operations

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Procedures for the facilitation and utilisation of military and civilian assets and capacities, (personnel, transportation and communication equipment, facilities, good and services, and the facilitation of their trans-boundary movement)

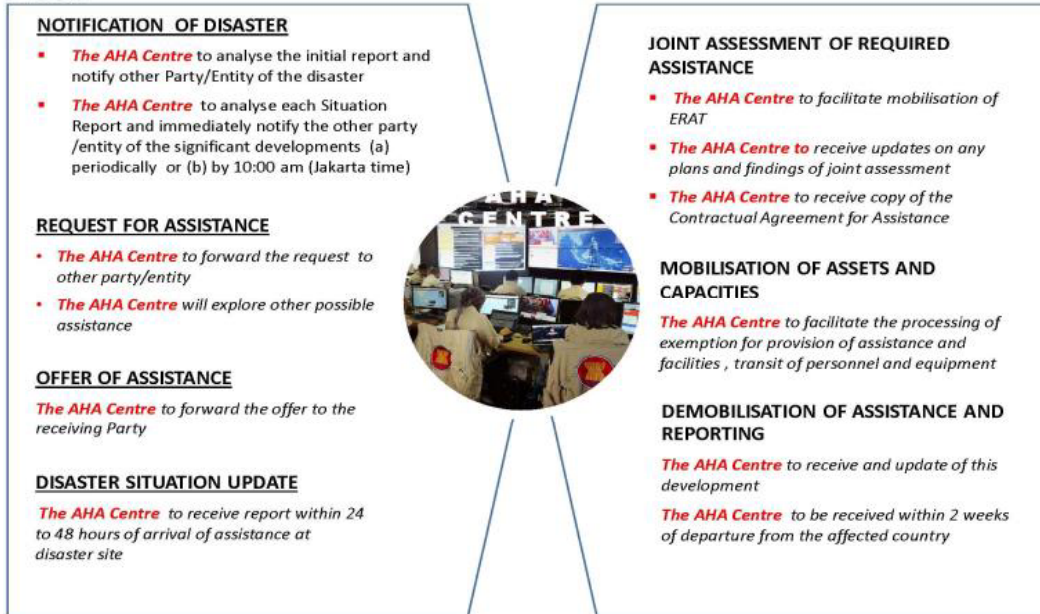
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Methodology for the periodic conduct of the ASEAN regional disaster emergency response simulation exercises (ARDEX) which shall test the effectiveness of this procedures

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# AHA Centre Roles and Responsibilities

And.. the AHA Centre is also tasked to perform most of the aspects under SASOP



## ASEAN tools and mechanisms on Disaster Response

- ASEAN Emergency Rapid Assessment Team: ASEAN ERAT
- Disaster Emergency Logistics System: warehouse for stockpile of emergency relief items in Subang, Malaysia
- ASEAN Regional Disaster Simulation Exercise
- Disaster Monitoring and Response System (DMRS)





# DISASTER EMERGENCY LOGISTIC SYSTEM ASEAN



ASEAN Stockpile in UNHRD Warehouse



Mobile Storage Unit (MSU)



Generators



Family Tent

One ASEAN One Response



## The deployment of ASEAN-ERAT Member from APG (Plan International) and Indonesian Red Cross during flooding in Myanmar 2015



One ASEAN One Response



# Thailand and ASEAN during disaster response and relief

- Communication with AHA Centre
- Activation of ASEAN ERAT members
- Activation of procedure according to SASOP
- “One ASEAN One Response”



## Recent Projects on Disaster Risk Reduction

- Flood Prevention Project
- One-Tambon-One-Search and Rescue Team (OTOS)
- Disaster Management Training
- Community-Based Disaster Risk Management (CBDRM) Program
- "Mr. Warning" Training Program
- Emergency Response Team Development Project (ERT)
- Development of Civil Defence Volunteer Network Program

# Counterpart of ADRC

- Department of Disaster Prevention and Mitigation, Ministry of Interior
- Address: 3/12 U-Thong Nok Road, Dusit, Bangkok 10300 THAILAND.
- Tel: +66 2243 5279
- Fax: +66 2243 5279
- E-mail: foreign\_dpm@yahoo.com
- Website: [www.disaster.go.th](http://www.disaster.go.th).

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# Research Plan

**Title:** *A study of the best practice on the prevention and reducing the impact of disasters by Civil Engineering method in Japan for adaptation to Thailand.*

***Specific Aims:***

- To study the Disaster Management System in Japan.
- To gather the knowledge of Civil Engineering to prevent and reduce the impact of the disaster in Japan.
- To identify better ways of Civil Engineering method for prevention and reducing the impact of disasters that can be applied to Thailand.
- Prepare recommendations for improvement of DDPM in Thailand

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# Research Plan

## ***Expected Results:***

- I would be able to learn the knowledge and innovations in the risk map from Japan for create and develop the risk map to prevent and reduce the impact on the risk area.
- I would have identified better ways of Civil Engineering method for prevention and reducing the impact of disasters that can be applied to Thailand.
- Best practices of Japan could be replicated in Thailand.

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Thank you.