Thailand Disaster & Emergency Management

July 2021

TAVIDA KAMOLVEJ, PHD
DEAN, FACULTY OF POLITICAL SCIENCE
THAMMASAT UNIVERSITY
BANGKOK, THAILAND

khaosodenglish

Thailand

What have we learned from disasters so far?

matichon

BBC

2004 Indian Ocean earthquake and tsunami

- the importance of building strong institutional coordination and adequate financing mechanisms
- putting resources into hazard mitigation and emergency preparedness is perhaps the best investment a country can make.
- the need to put communities at the center of the reconstruction process.

- Inadequate research and development in earthquake and tsunami sciences in Thailand
- a lack of proper maintenance of the critical facilities for the earthquake and tsunami mitigation
- It is very difficult to maintain the level of the awareness of the people about the great danger of the earthquake and tsunami

2011 Thailand Mega floods

- the urgent need for institutional reforms. Neither the government nor public could say which institution was ultimately responsible. Various authorities had different views on flood management and took contradictory positions. Contradictory statements came from different institutions, which confused the public. There must be a consistent and realistic strategy for the Thai authorities to manage floods effectively and promptly.
- Real-life problems cannot always be simulated on computer. Simulating models and publishing research papers that have little relevance indicates a failure from a societal and scientific perspective.

- We need to continuously learn from mistakes and prepare for a better future. The fact that Thailand had been able to ward off previous disasters was primarily due to good fortune. The country may not be so fortunate next time.

2014 Mae Lao earthquake

- Our weakness is we fail to share our experiences of facing disaster in their aftermath, community memory and historical accounts of earthquakes can provide useful information to supplement scientific studies.
- the local building regulations is needed which provide for local-friendly earthquake protection and engaging the local engineering community to gaining local knowledge of risk reduction with measures design for long-term investment.
- We need to provide backup for critical facilities should remain functional after an earthquake. A clear emergency management plan should be drafted and practiced to prepare in locally for crisis mitigation or even mass evacuation
- the need to allocate authorities and responsibilities for undertaking local level DRR action, capacity development necessarily follows as local empowerment promotes DRR action.

PM2.5 Air pollution crisis

- **Need of reliable, accessible and real-time information helps create momentum for reform**
- **Failure to provide such incentives resulted in the government developing plans but not implementing them.**
- **An integrated approach with effective institutions working across sectors and jurisdictions is critical. Air pollution knows no boundaries and requires an airshed-based management perspective. This in turn demands an approach that cuts across jurisdictions and authorities.**

the COVID-19 Pandemic in Thailand

- **Faster detection and better responses require a robust national health surveillance and an improved national wide pandemic information gathering system.**
- **Clearer and more coordinated scientific advice would facilitate policy decisions and public communication.**

Stage 1: Imported Cases
(January – late-January 2020)

Stage 2: Limited Local Transmission
(late-January - late-March 2020)

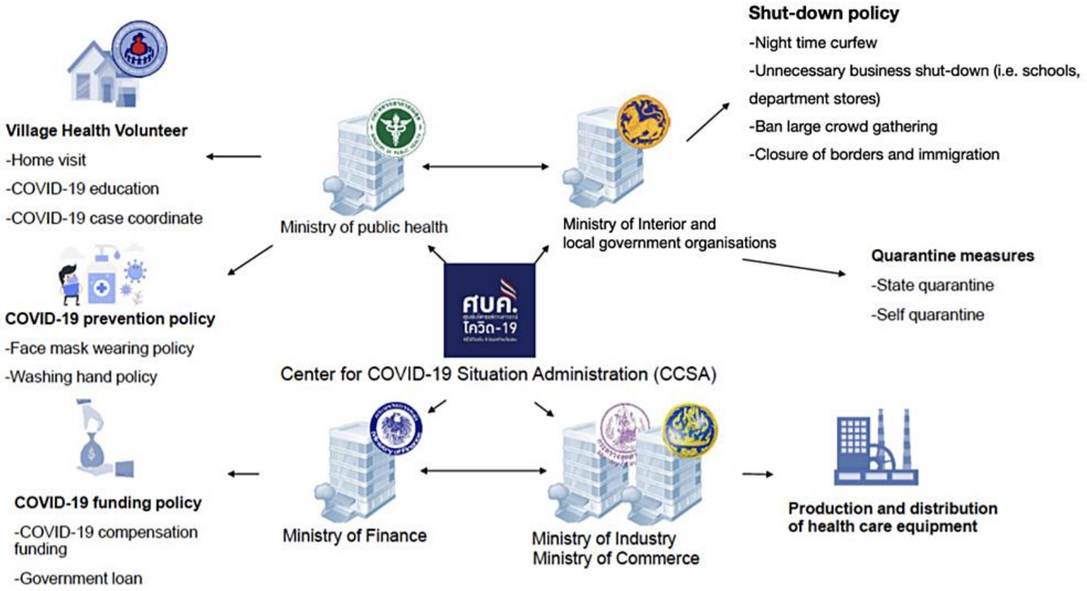
Stage 3: Widespread Clustered Cases
(late-March - April 2020)

Stage 4: Widespread Clustered Cases
(Mid-December 2020 - Early February 2021)

Stage X : Practically uncontrollable
(late April 2021 - present)

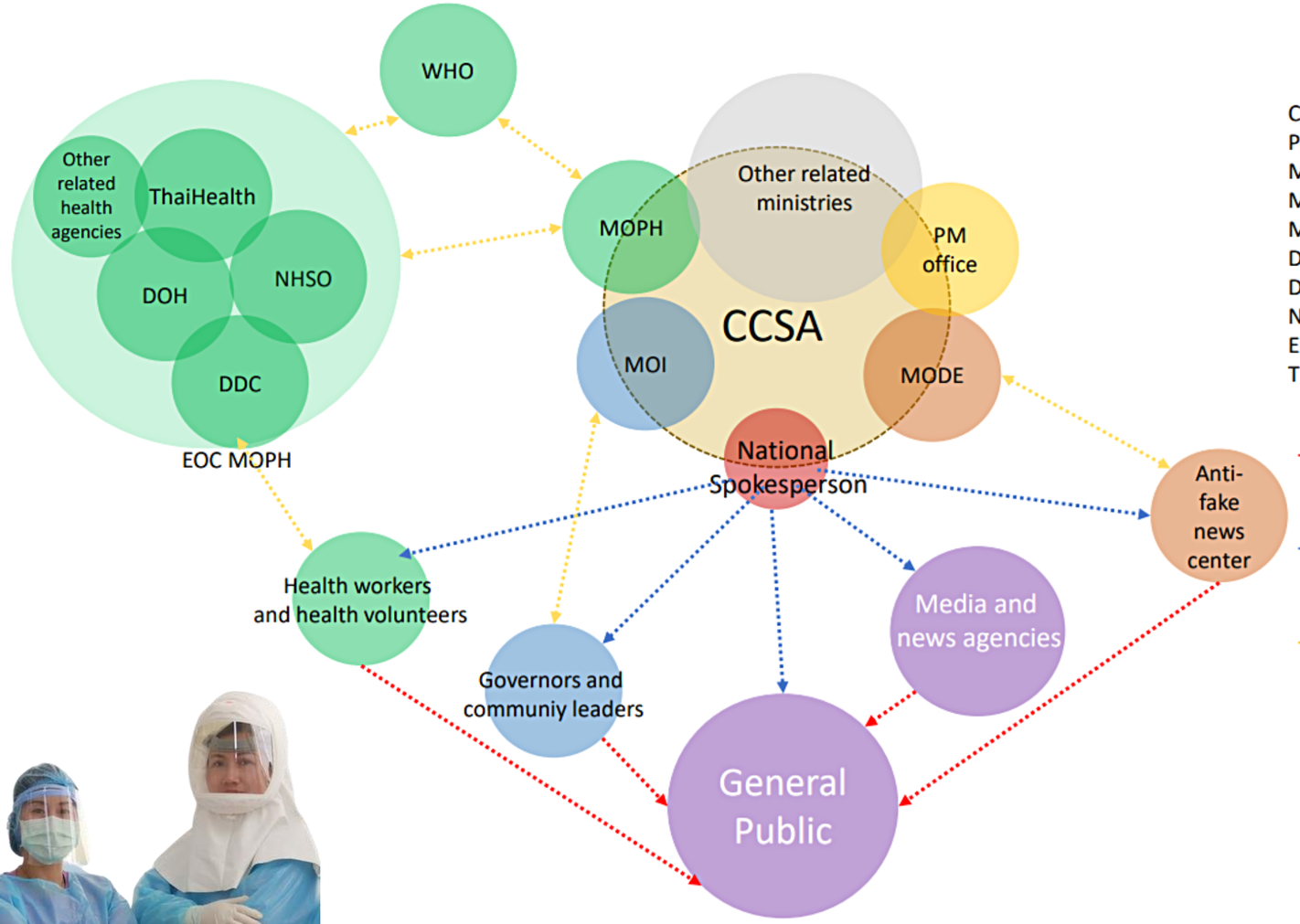
- The capacity to cope in a pandemic depends on continuous and increased investment in health systems. We should be supported to strengthen the overall resilience of health care systems as part of their recovery and resilience investments.
- A more coordinated and sophisticated approach to tackling misinformation and disinformation should be developed.

Containment strategies in Thailand for COVID-19



the COVID-19 Pandemic in Thailand

Infodemic I Flow of information in the risk communication system



CCSA: The Center for COVID-19 Situation Administration
PM: Prime Minister
MOPH: Ministry of Public Health
MOI: Ministry of Interior
MODE: Ministry of Digital Economy and Society
DOH: Department of Health
DDC: Department of Disease Control
NHSO: National Health Security Office
EOC: Emergency Operation Center
ThaiHealth: Thai Health Promotion Foundation

amplified and simplified information delivered by other partners

Official information delivered by national spokesperson

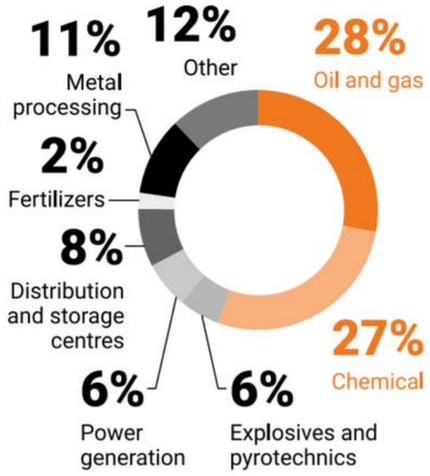
Two-way information:
1.Feedback and update of the current situation at the local level,
2.Verified information to be further disseminated to public (scientific and policy measures)

moph, 2021

2021 Bangkok chemical plant explosion

- many emerging economies have experienced rapid growth in hazardous operations from expansion of particular segments of oil and gas, chemical and petrochemical and mining industries, driven by a combination of factors including increased demand in emerging economies, access to raw materials and the need to lower production costs, facilitated by a decline in trade barriers and government incentives to attract foreign investors.

Distribution of high hazard, fixed facility sites (Seveso Directive) in EU and European Economic Area countries in 2014

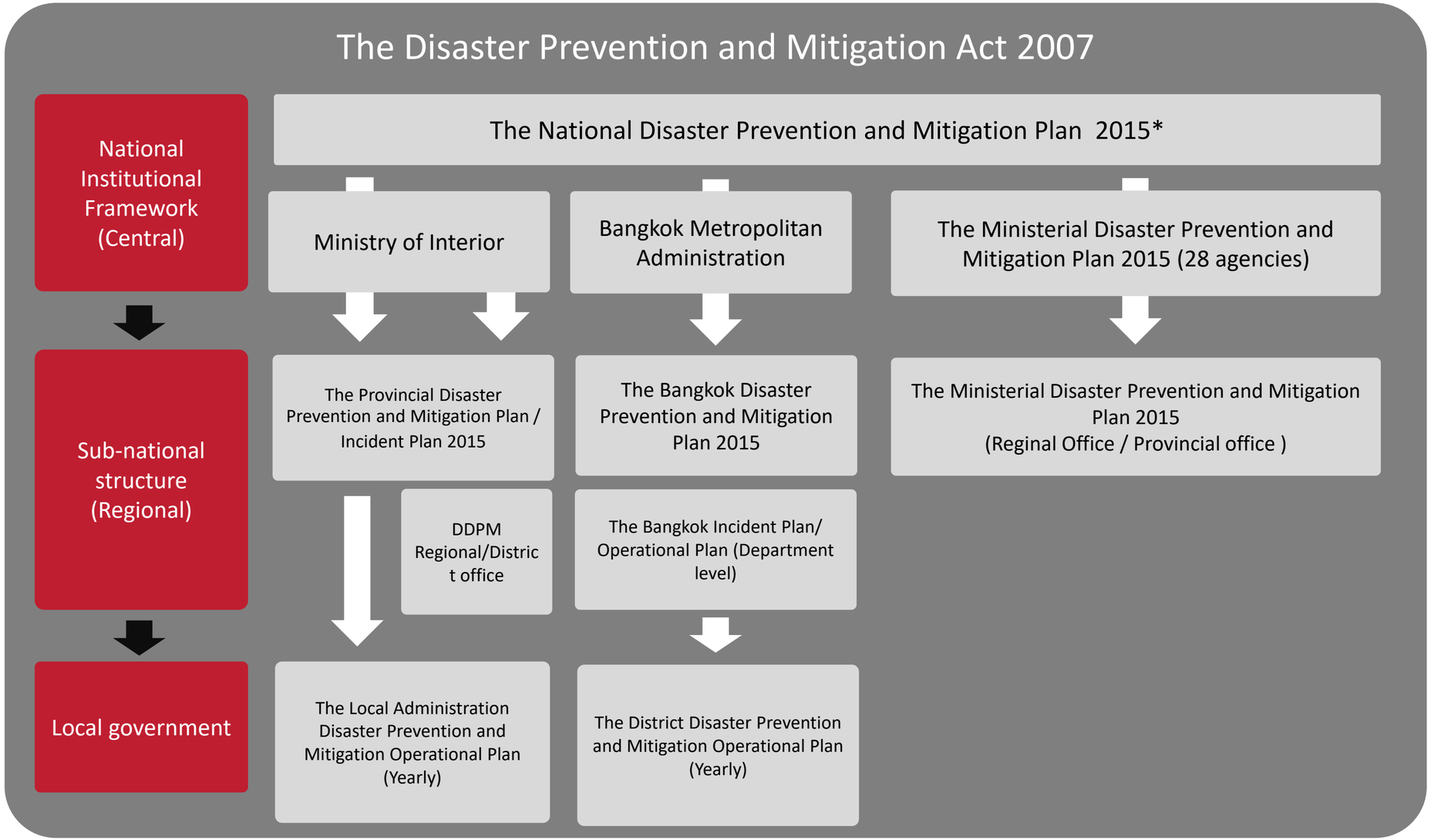


- **Complex nature of industrial accident risk and risk management processes**
  - The likelihood of an incident occurring depends significantly on how well the risks are managed (the safety management system) and by decisions of the organization(s) that affect the functional effectiveness of the safety management system
- **Strengthening land-use planning policies**
  - Land-use planning is central to reducing industrial risk. Decisions on the siting of industrial facilities and the planning of surrounding land use are critical in protecting and minimizing the effects of accidents on the surrounding populations, environment and property
- **Convention on the Transboundary Effects of Industrial Accidents**
  - a multilateral legal instrument that supports countries in establishing and enhancing governance, policymaking and transboundary cooperation on industrial accident prevention, preparedness and response.

Thailand disaster law and plan in overview

*NDPC 2015 is on progress of review to the NDPC 2020 (DDPM,2019)

Primary laws/plans (not including military structures)



Related laws/plans

- National Strategy 2018-2037 (Strategy 5)
- National Master Plan towards the National Strategy 2018-2037
- National Security Council Act 2016
- Thailand 4.0 Vision
- The National Economic and Social Development Plan 2017-2021
- National Preparedness Strategy 2017-2021
- National Adaptation Plan (NAP) 2015-2050

Ikeda & Thawatchai, 2020

Overview of legal and institutional framework

DRM System Type

Broad DRM System law(s)

Covers the full spectrum of disaster risk management: some elements of DRR, prevention, preparedness, early warning, mitigation, emergency management / response and early recovery.

Main DRM Legal Framework

Disaster Prevention and Mitigation Act 2007

Main DRM Plan Framework

The National Disaster Prevention and Mitigation Plan 2015

Main DRM Institutional Framework

Department of Disaster Prevention and Mitigation (Ministry of Interior)

DDPM

Ikeda & Thawatchai, 2020

Key state agencies of the National Disaster Risk Management System

Interagency Relationships and Collaborative Linkages for Emergency Management Operations

THAILAND Disaster & Emergency Management

Disaster Risk Management Mechanisms

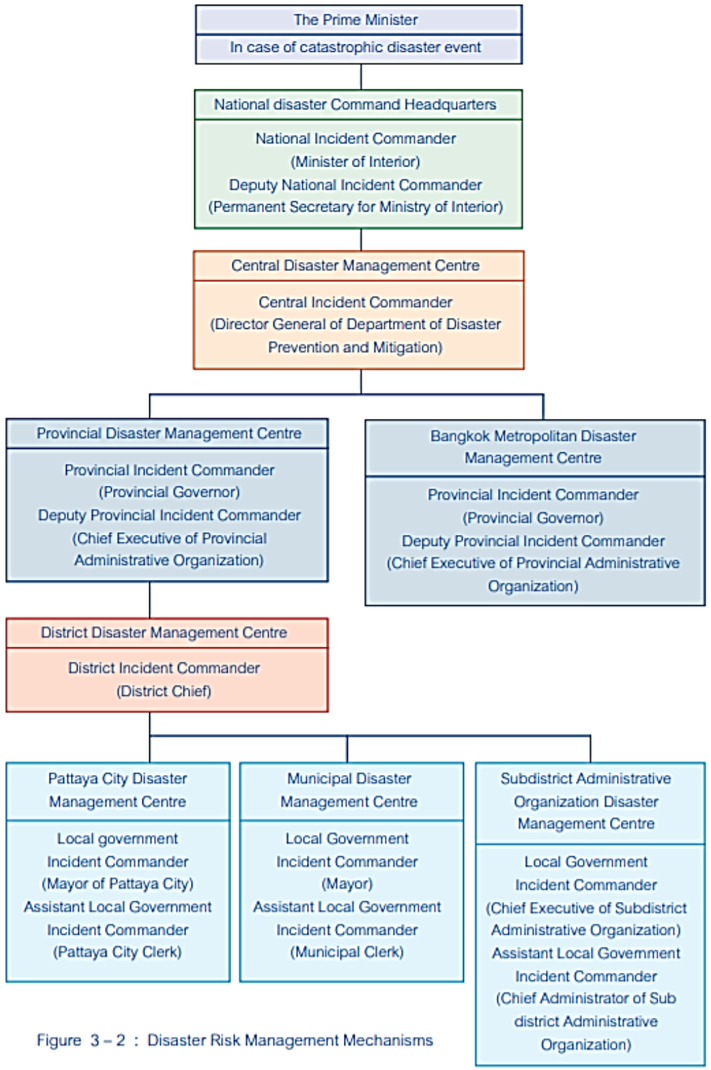
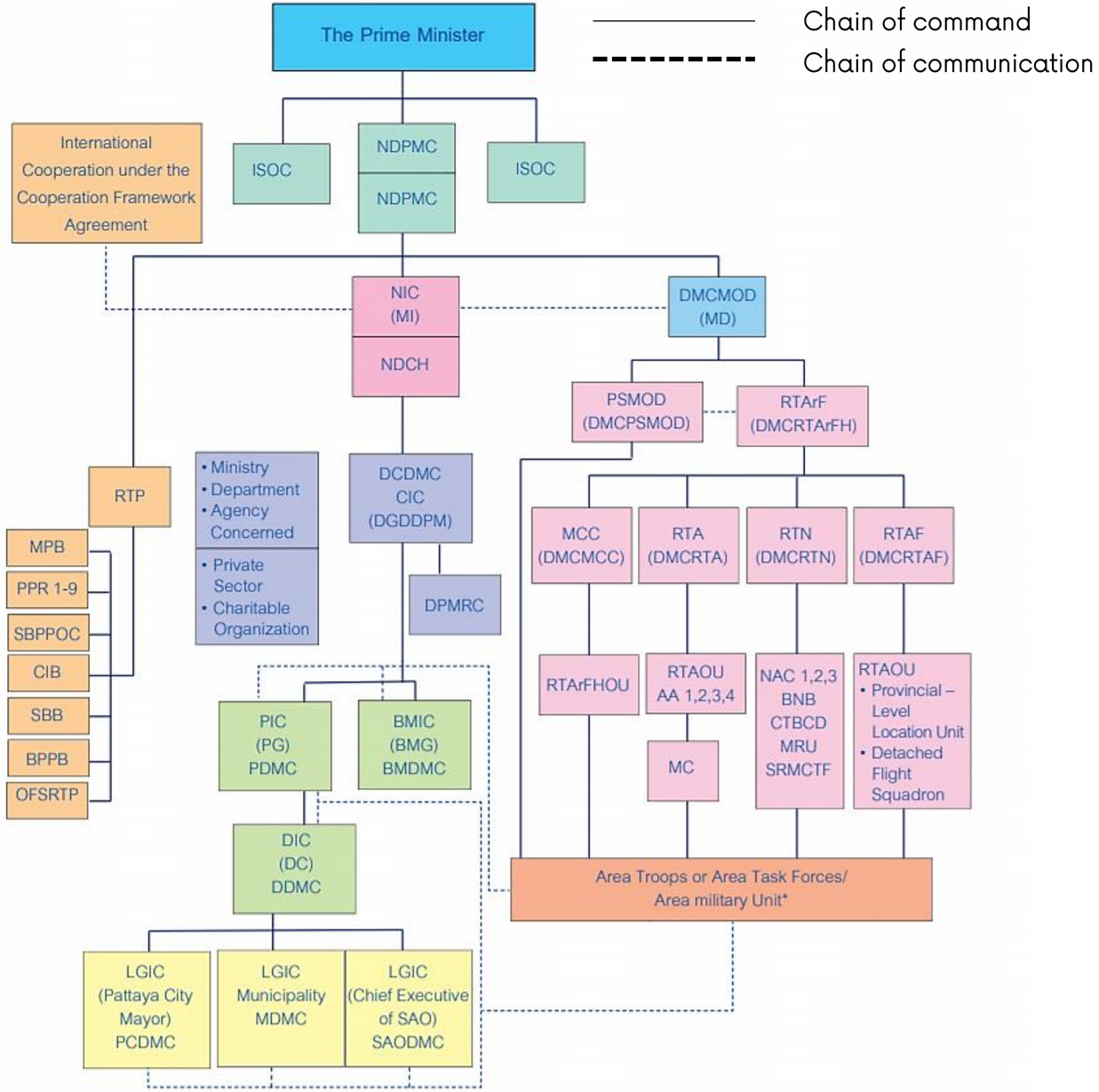


Figure 3 – 2 : Disaster Risk Management Mechanisms



National Disaster Risk Management Plan

2015

Risk Management
- Strategy 1 Focusing on disaster risk reduction
- Strategy 2 Applying integrated emergency management system
- Strategy 3 Strengthening and enhancing the efficiency of sustainable disaster recovery
- Strategy 4 Promoting and strengthening international cooperation on disaster risk management

Emergency Management
- Strategy 1 Developing Standards for Emergency Management
- Strategy 2 Developing Emergency Response Support System/Mechanism
- Strategy 3 Strengthening the System & Guiding Principles for Disaster Relief Operations

Disaster Recovery
- Strategy 1 Developing Post-Disaster Need Assessment Approach
- Strategy 2 Developing Recovery Operations and Management System
- Strategy 3 Enhancing the Concept of Building Back Better and Safer in post-disaster reconstruction and recovery

International Cooperation for Disaster Risk Management
- Strategy 1 Developing coordination system for unified efforts in humanitarian assistance operations
- Strategy 2 Raising Standards in Humanitarian Response
- Strategy 3 Strengthening the Country's Knowledge Sharing Initiatives
- Strategy 4 Enhancing the Country's Leading Role in Disaster Risk Management

Draft 2021 (revision)

Disaster Risk Reduction
- Strategy 1 Strengthening disaster risk knowledge in all levels (National, Regional and local)
- Strategy 2 Standards of disaster risk reduction measures
- Strategy 3 Collaboration and partnership in disaster risk reduction

Integrated Emergency Management
- Develop unified emergency management standards
- Develop systems and tools to support incident response.
- Optimizing relief systems and practices

Sustainable Recovery
- Develop a post-disaster needs assessment system. Assessment: PDNA
- Develop guidelines for rehabilitation
- Reinforcing a building back better and safer

International Cooperation for Disaster Risk Management
- Strengthen strategic partnerships on international disaster risk management
- Develop a unified humanitarian aid coordination system
- Strengthening Codes and Standards for Humanitarian Assistance
- Encourage the leadership in disaster risk management

Information management systems and application of disaster innovations
- Develop disaster information systems
- Develop knowledge management on disaster risk management
- Develop disaster risk communication
- Promote public-private partnership and investment for DRR
- Participation in disaster risk management

*NDPC 2015 is on progress of review to the NDPC 2020 (DDPM,2019)

Linking National Disaster risk management with AADMER

Example

Area	Area of linkage - National Mechanism / System	Link with AADMER
Risk Assessment	• National DPM Committee / National Plan • Landslide risk assessment by DMR • Earthquake risk assessment by TMD, DMR • Flood risk assessment by RID, DDPM • Drought risk assessment by DDPM	• Though joint activities under the AADMER Work Program • DDPM as the National Focal Point to coordinate with the agencies concerned and AHA Centre of ASEAN
Waring / Monitoring	• National DPM Committee / National Plan • National Disaster Waring Center (Tropical cyclone, tsunami, earthquake) • TMD (Tropical cyclone, earthquake) • DDPM (Mister Warning project) • The Provinces / local authorities	• Though joint activities under the AADMER Work Program • DDPM as the National Focal Point to coordinate with the agencies concerned and AHA Centre of ASEAN
Preparedness	• National DPM Committee / national plan • DDPM (DPM Academy), CMEX, Provincial disaster drill, Civil defense volunteers • The Provinces / local authorities	• ARDEX Exercise • Though joint activities under the AADMER Work Program • DDPM as the National Focal Point to coordinate with the agencies concerned and AHA Centre of ASEAN

Linking National Disaster risk management with AADMER

Example

Area	Area of linkage - National Mechanism / System	Link with AADMER
Response	• National DPM Committee / National Plan • DDPM (ERT team, CBDRM, CMEX Exercise) • Military Response team • Medical Team • Volunteers / Red Cross / First responders / OTOS	• Though joint activities under the AADMER Work Program • DDPM as the National Focal Point to coordinate with the agencies concerned and AHA Centre of ASEAN • ARDEX • ASEAN ERAT

Key challenges

- The challenge will be on the shoulder of DDPM as the National Focal Point in Disaster Risk Management, to Strengthening the process of linking national mechanism with the AADMER
- Enhancing of SAR team, ERAT relief teams that has the international capacity

Role of Thailand in ASEAN disaster risk management
: Achieving the ASEAN 2025 Vision for Disaster Management

Space-based Information Utilization to Support Emergency Response & Recovery

: Case of the Geo-Informatics and Space Technology Development Agency (GISTDA)

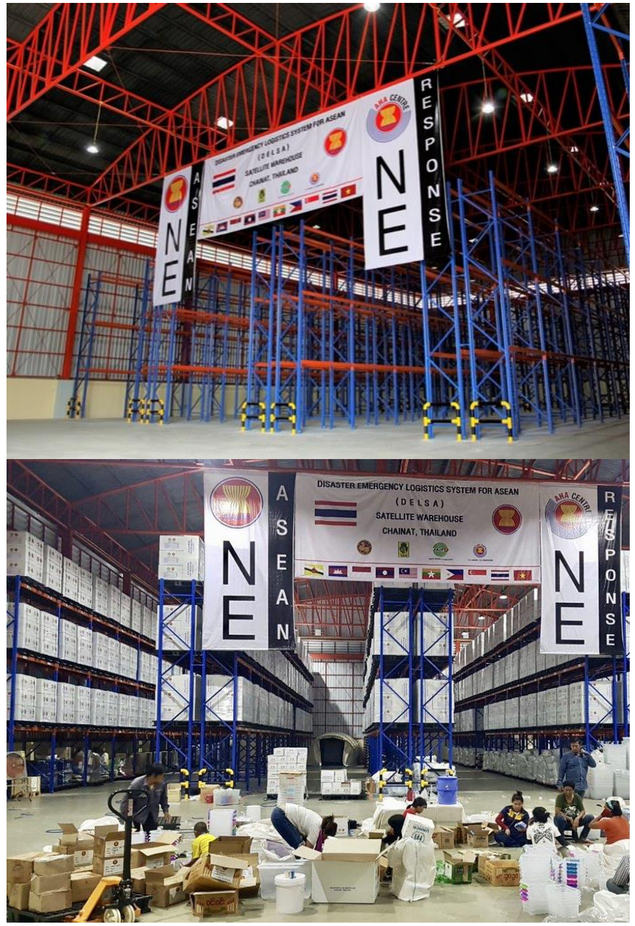
ASEAN Member States' interest in participating and contributing to the Sentinel Asia platform is quite high. As of September 2018, 51 of Sentinel Asia's 108 Members are organizations (government and non-government) based in the ASEAN region.

COUNTRY	Data Provider Nodes DPN	Data Analysis Nodes DAN	User Only
Brunei Darussalam	-	1	-
Cambodia	-	-	2
Indonesia	-	4	3
Lao PDR	-	-	2
Malaysia	-	1	2
Myanmar	-	-	3
Philippines	-	5	4
Singapore	1	2	
Thailand	1	2	6
Viet Nam	1	2	4
Regional/ international organisation based in ASEAN	-	2	3

Flow of Sentinel Asia emergency observation (Sentinel Asia Secretariat)

Thailand as ASEAN Center for Disaster Relief Aid (Disaster Emergency Logistics System For ASEAN; DELSA)

a key mechanism to allow for swift provision of relief items to ASEAN countries facing post-disaster emergency situations. Launched on 7 December 2012, DELSA was established to develop a regional relief item stockpile and to support capacity enhancement of the AHA Centre and among ASEAN Member States in emergency logistic operations. DELSA focuses on three main elements — regional emergency stockpiles, institutional capacity building, and communication and awareness. DELSA's establishment and operations have been supported by the Government of Japan, while the AHA Centre works closely with WFP – UNHRD on logistics technical aspects. The AHA Centre also coordinates with National Disaster Management Organizations (NDMOs) of the ASEAN Member States to distribute those relief goods to disaster-affected countries as needed to support emergency response efforts.



Thailand Disaster & Emergency Management

July 2021

TAVIDA KAMOLVEJ, PHD
DEAN, FACULTY OF POLITICAL SCIENCE
THAMMASAT UNIVERSITY
BANGKOK, THAILAND