

Final Research Paper

SAFETY CULTURE NETWORKING IN THAILAND

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TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 BACKGROUND AND SIGNIFICANCE	1
1.2 PROBLEM	1
1.3 QUESTION	1
1.4 SPECIFIC AIM	1
1.5 SCOPE OF STUDY	1
2. DISASTER MANAGEMENT IN JAPAN	2
2.1 GENERAL INFORMATION	2
2.2 JAPAN DISASTER PROFILE	2
2.3 JAPAN DISASTER MANAGEMENT SYSTEM	3
3. DISASTER MANAGEMENT IN THAILAND	9
3.1 GENERAL INFORMATION	9
3.2 THAILAND DISASTER PROFILE	11
3.3 THAILAND DISASTER MANAGEMENT SYSTEM	13
4. SAFTY CULTURE NETWORKING	17
4.1 INTRODUCTION	17
4.2 SAFTY CULTURE NETWORKING IN JAPAN	19
4.3 SAFTY CULTURE NETWORKING IN THAILAND	29
5. LESSONS LEARNED FROM JAPAN, CONCLUSION AND RECOMMENDATIONS	43
5.1 LESSONS LEARNED FROM JAPAN	43
5.2 CONCLUSION AND RECOMMENDATIONS	48
REFERNCE	53

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND AND SIGNIFICANCE

At present, Thailand is driving agenda on “SAFETY THAILAND” policy which accelerates the building of safety culture in Thai society and compels cooperation in concrete disaster management in regional level and global community in order to achieve the important goals for providing safety to Thai people and improve standard of disaster management. Therefore, DDPM, as the central government agency to operate any related activities on national disaster prevention and mitigation including promoting network activities, realizes the importance of developing safety culture in Thailand.

Network in community is initiate unit of disaster management. Most members of network are social leaders and play important role in the community. They can transfer Safety Culture to the people in community. Thus, Effective networks are critical to cultivating Safety Culture in community.

1.2 PROBLEM

Thai communities and people lack of safety culture

1.3 QUESTION

- How to cultivate and increase safety culture in Thailand
- How to strengthen networking in Thailand for cultivating and increasing safety culture in their community.

1.4 SPECIFIC AIMS

- To understand the Disaster Management in Japan.
- To understand the concept and experience of safety culture networking in Japan.
- To develop safety culture networking in Thailand toward building community resilience to disaster.

1.5 SCOPE OF STUDY

Investigating, analyzing and comparing safety culture networking between Japan and Thailand in terms of law, plan, policy and activities.

CHAPTER 2: DISASTER MANAGEMENT IN JAPAN

2.1 GENERAL INFORMATION

Japan is an island country located in the western Pacific Ocean. Total land area is about 378,000 square kilometers. More than 70 percent of land surface is mountainous. As it is situated along the circum-Pacific volcanic belt, Japan has several volcanic regions and frequently affected by earthquakes and Tsunami. A major feature of Japan's climate is the clear-cut temperature changes between the four seasons. In spite of its rather small area, the climate differs in regions from a subarctic climate to a subtropical climate. The side of the country which faces the Sea of Japan has a climate with much snow in winter by seasonal winds from the Siberia. Most of the areas have damp rainy season from May to July by the seasonal winds from the Pacific Ocean. From July to September, Japan frequently suffers from Typhoon. The capital is Tokyo. Total population is about 127.77 million. (ADRC, 2018 : online).

2.2 JAPAN DISASTER PROFILE

Japan is located in the Circum-Pacific Mobile Belt where seismic and volcanic activities occur constantly. Although the country covers only 0.25% of the land area on the planet, the number of earthquakes and active volcanoes is quite high. In addition, because of geographical, topographical and meteorological conditions, the country is subject to frequent natural disasters such as typhoons, torrential rains, and heavy snowfalls, as well as earthquakes and tsunami (Cabinet Office, 2015 : online).

Japan is affected by Typhoon mostly every year and Volcanic disasters triggered by eruption and volcanic earthquake. Japan is earthquake prone area due to the geological formation with plate boundaries of the Pacific plate, the Philippine Sea plate, the Eurasian plate, and the North American plate.

The past major disasters are as follows:

- Great Hanshin-Awaji Earthquake (January 1995)
On 17 January 1995, an earthquake with a 7.3 on the Richter scale occurred at Awaji island of Hyogo Prefecture in Western Japan. It killed 6,434 people, injured 43,792 people, destroyed 104,906 houses, half destroyed 144,274 houses, and partially destroyed 390,506 houses. By the fires broke out along with the earthquake, the area of 835,858 square meters was burnt down.
- Niigata Ken Chue Su Earthquake (October 2004)
On 23 October 2004, Niigata Prefecture was affected by an earthquake with a 6.8 on the Richter scale. Landslides and destruction of buildings and houses

caused 68 dead, and 4,805 injured. 3,175 houses were totally destroyed, 13,810 houses were half destroyed, and 105,573 houses were partially destroyed.

- **The Great East Japan Earthquake**

A magnitude 9.0 earthquake hit the northeastern Japan on 11 March 2011, recording the largest earthquake hit in Japan. Its epicenter was located in the coast of Sanriku and its epicentral area stretched from the coasts of Iwate Prefecture to Ibaraki Prefecture. Massive shakes were observed particularly in eastern Japan including Japanese intensity scale of 7 registered in the north of Miyagi Prefecture. Furthermore, this earthquake, a trench-type earthquake occurred near the boundary of the Pacific Plate and the plate beneath Tohoku area, triggered seafloor movements and generated massive tsunami. According to the National Police Agency, this earthquake and tsunami have left unprecedented human suffering: 15,870 people death, 2,814 people missing and 6,114 people injured, as well as property damage: 129,472 totally collapsed buildings, 255,977 half collapsed buildings and 702,928 partially collapsed buildings. Furthermore, the value of the destruction of the social infrastructure, housing, and corporate facilities was estimated at 16.9 trillion yen and it had a great impact on Japanese economy.

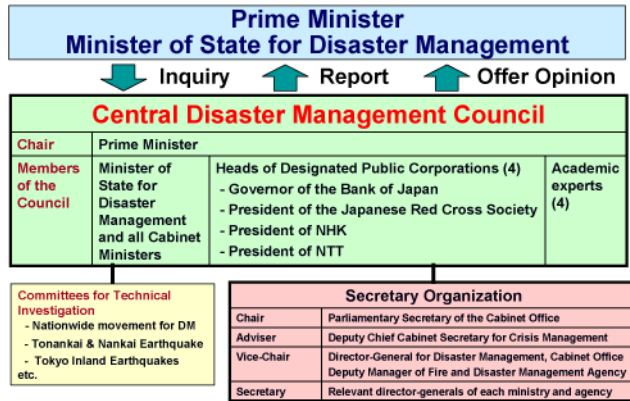
2.3 JAPAN DISASTER MANAGEMENT SYSTEM

2.3.1 Overview

Under the Disaster Countermeasures Basic Act, the Central Disaster Management Council was formed, its brief being to ensure the comprehensiveness of disaster risk management and to discuss matters of importance with regard to disaster management. The council consists of the Prime Minister, who is the chairperson, Minister of State for Disaster Management, all ministers, heads of major public institutions and experts.

Within the Cabinet Office, which is the secretariat for this Council, the Minister of State for Disaster Management has been assigned as the Minister State for Special Missions for this issue. This Minister is assisted by the department of the Cabinet Office Director-General for Disaster Management his mandate being to handle planning and central coordination with regard to matters relating to basic policy on disaster risk reduction, and matters concerning disaster countermeasures in the event of a large-scale disaster.

In prefectures and local municipalities, the prefectural and municipal Disaster Management Councils are established with the members of representatives of local government organizations including police and fire management department, and designated local public corporations. Implementation of disaster risk management measures is based on the Local Disaster Management Plans drafted by the Councils. (ADRC, 2018: online)



Source: <http://www.bousai.go.jp>

2.3.2 Disaster Management Law

In order to applying to all of the disaster phases of prevention, mitigation and preparedness, emergency response as well as recovery and rehabilitation, relevant laws and regulations were enacted. They include Disaster Countermeasures Basic Act (1961), Erosion Control Act (1897), Disaster Relief Act (1947), Building Standard Law (1950), Landslide Prevention Act (1958), River Act (1964), and Act on Special Measures for Large-scale Earthquakes (1978). (ADRC, 2018 : online)

The Disaster Countermeasures Basic Act in 1961 formulates a comprehensive and strategic disaster management system. Thereafter, the disaster management system has been continuously reviewed and revised following the lessons learned from large-scale disasters. (Cabinet Office, 2015 : online)

Outline of the Disaster Countermeasures Basic Act:

- 1) Clearer definition of the philosophy and the responsibilities for disaster management.
 - Basic idea of disaster countermeasures: Clarification of basic policies including the concept of disaster reduction
 - Responsibilities of the government, prefectures, municipalities, and designated public institutions: Formulation and implementation of the philosophy and plan for disaster management, mutual cooperation
- 2) Organization: Development and promotion of comprehensive disaster management administration

- National government: Central Disaster Management Council, major (extreme) disaster management headquarters
 - Prefectural and municipal governments: Local disaster management headquarters
- 3) Planning system: Development and promotion of systematic disaster management measures
- Central Disaster Management Council: Disaster Management Basic Plan
 - Designated local government organizations and public institutions: Disaster management operation plan
 - Prefectures and municipalities: Local disaster management plan
 - Residents: Community disaster management plan
- 4) Promotion of Disaster Countermeasures
- Definition of the roles and responsibilities to be performed by each actor in each stage of prevention, preparedness, response and recovery
 - Primary disaster response procedures including evacuation order by the head of municipalities taking over emergency measures by prefectures or designated administrations in case of the large-scale disaster
- 5) Protection of affected people and their livelihood
- Prior preparation of the lists of the people requiring assistance in the case of disaster
 - Clarification of the standards for evacuation centers and facilities in the case of disaster
 - Improvement and expansion of protection measures for affected people through preparation of the certificates and the list of affected people
 - Stipulation of the framework for wide-scale evacuation and goods transportation
- 6) Financial measures
- Implementation of laws are funded by each responsible party
 - Financial measures for extreme disasters by the government
- 7) State of Disaster Emergency
- Declaration of disaster emergency state → Cabinet decision of government's policy (basic policy for countermeasures)
 - Emergency measures (restriction on distribution of basic necessities, moratorium on financial obligation, urgent enactment of Cabinet Order related to acceptance of international support, automatic enforcement of the Act on Special Measures concerning Preservation of Rights and Interests of Victims of Specified Disaster)

2.3.3 Disaster Management Plans

Japan is governed by a three-tiered administration: the national government, prefectures, and municipalities. The head of each level takes full responsibility for that jurisdiction in a structure similar to that of a nation. Comprehensive disaster prevention plans are developed in accordance with the roles to be performed at each stage.

Cabinet Office, Government of Japan explains Disaster Management Planning System and Basic Disaster Management Plan as follows:

1) Disaster Management Planning System

1.1) Basic Disaster Management Plan: This plan is the highest-level plan and constitutes the basis for disaster management activities prepared by the Central Disaster Management Council based on the Disaster Countermeasures Basic Act.

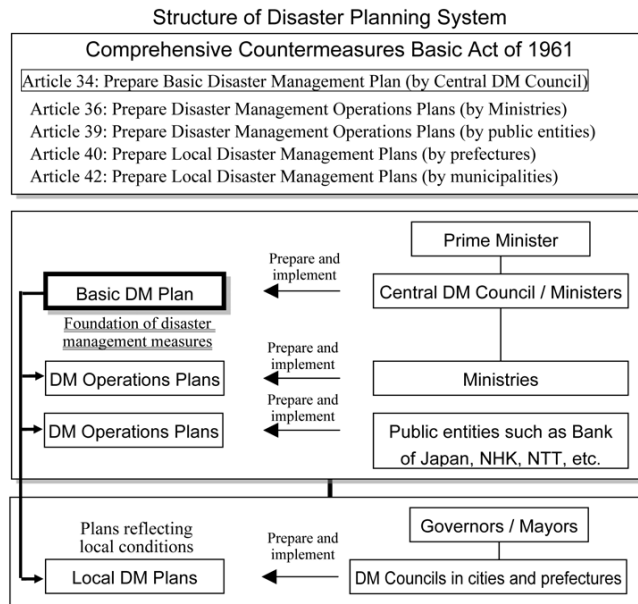
1.2) Disaster Management Operation Plan: This is a plan made by each designated government organization and designated public corporation based on the Basic Disaster Management Plan

1.3) Local Disaster Management Plan: This is a plan made by each Prefectural and Municipal Disaster Management Council, subject to local circumstances and based on the Basic Disaster Management Plan

1.4) Community Disaster Management Plan: This is a disaster management activities plan at the community level which is established by residents and businesses jointly on a voluntary basis.

2) Basic Disaster Management Plan

The Basic Disaster Management Plan is a comprehensive and long-term disaster management plan forming a foundation for the Disaster Management Operations Plan and Local Disaster Management Plan. It stipulates provisions for the establishment of the disaster management system promotion of disaster management measures, acceleration of post disaster recovery and reconstruction measures, and promotion of scientific and technological research on disaster management.



Source: <http://www.bousai.go.jp>

2.3.4 Emergency Response to Disasters

Cabinet Office, Government of Japan explains Emergency Response to Disasters as follows:

1) Outline of Disaster Emergency Response

In the event of a disaster, the national and local governments quickly collect and share disaster and damage information, and secure communications to carry out effective emergency activities such as emergency rescue and medical operations. Based on such information, local governments set up disaster management headquarters and related organizations establish their own operation mechanisms. The national government collects disaster information at the Cabinet Information Collection Center 24 hours a day. When a large-scale disaster strikes, an emergency team composed of the director-generals of the respective ministries and agencies gathers immediately at the Crisis Management Center in the Prime Minister's Official Residence to grasp and analyze the disaster situation, and report the results to the Prime Minister. Disaster Management meetings at the ministerial or high-ranking senior official level are held, as necessary. According to the level of damage, the government may establish the Headquarters for Major Disaster Management (headed by the Minister of State for Disaster Management) or the Extreme Disaster Management Headquarters (headed by the Prime Minister), to establish the policies for the disaster countermeasures, and to coordinate various emergency measures to be taken by various organizations. Further, in order to grasp the situation in the disaster area, a government investigation team headed by the Minister of State for Disaster Management may be dispatched, or if quick and swift actions are needed to be taken with overall coordination

of emergency activities on site, the government may establish the onsite headquarters for disaster management.

2) Wide-area Support System

In case of large-scale disasters that exceed the response capabilities of the affected local government, various wide-area support mechanisms are mobilized by the National Police Agency (Disaster Response Units), Fire and Disaster Management Agency (Emergency Fire Rescue Team), and Japan Coast Guard. Furthermore, the Self-Defense Forces can be dispatched for emergency response activities upon request from the governor of the affected prefecture. Also, the Disaster Medical Assistance Teams (DMATs) are dispatched to provide wide-area medical services. These teams transport severely injured persons via Self-Defense Forces vehicles and aircrafts to hospitals outside the disaster stricken zone.

3) System for coordinating activities between the national government and local public entities

In the event of a disaster occurring, municipalities will primarily be engaged in emergency countermeasures as they are the closest to residents. Prefectural administration will get involved when the comprehensive wider-area measures are necessary.

In the event of a large-scale disaster beyond the capability of local public entities struck by the disaster, national government will step in to support the local entity and coordinate mutual support among the local entities.

At the national level, the Extreme Disaster Management Headquarters or the Major Disaster Management Headquarters is set up to promptly collect the disaster information from relevant ministries and local public entities struck by the disaster, and overall coordination is provided for rescue, first aid, medical and emergency supplies as necessary and appropriate. Also, an on-site disaster management headquarters may be set up to promptly coordinate among the affected local entities and collect information and requests from relevant prefectures and to properly conduct the emergency response activities in consideration to the needs for the affected people.

The on-site disaster management headquarters were set up in the affected areas in such cases as the Great East Japan Earthquake in 2011, the heavy snowfall in 2014, the torrential rainfall in August 2014, and the volcanic eruption of Mt. Ontake in 2014. Through joint meetings held in collaboration with the disaster response headquarters organized by the local entities in the affected areas, the national government and the local entities coordinate based on their shared awareness to serve as the government's closest one-stop contact point for requests from the affected local entities. As such, the role of the on-site disaster management headquarters is increasing its importance.

CHAPTER 3 : DISASTER MANAGEMENT IN THAILAND

3.1 GENERAL INFORMATION



The Kingdom of Thailand lies in the heart of Southeast Asia, has a land area of 513,120 sq.km. It is bordered by Myanmar (West & North), Laos (North & East), Cambodia (Southeast), and Malaysia (South). The Thai coastline stretches for 3,219 km along both the Gulf of Thailand on the Pacific side, and the Andaman Sea on the Indian Ocean side. 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.

Thailand is divided into four regions; the North, the Central or the Chao Phraya River Basin, the Northeast or the Korat Plateau and the south or the Southern Peninsula. The northern region terrain is mountainous which render this region to be prone to water-related disasters such as flashflood, landslide and debris flow. The northeastern region is an arid area on Korat Plateau and frequently suffers flashflood and inundation during rainy season, severe drought and cold spell during summer and cool season. The central region, the vast fertile land which is dubbed as the "Rice Bowl" of the country often encounters the repeated riverine flood and urban inundation during the rainy season. The southern region terrain is hilly on the west coast and the coastal plain on the east. This part of Thailand has occasionally frequented flashflood, mudslide, tropical storm and forest fire.

Thailand is unitary state in Southeast Asia and a constitutional monarchy under the king, The King of Thailand, King Vajiralongkorn (or Rama X), is the current monarch, reigning since the death of his father Bhumibol Adulyadej (Rama IX) on 13 October 2016, in actuality he has only exercised the role of monarch since 1 December 2016.

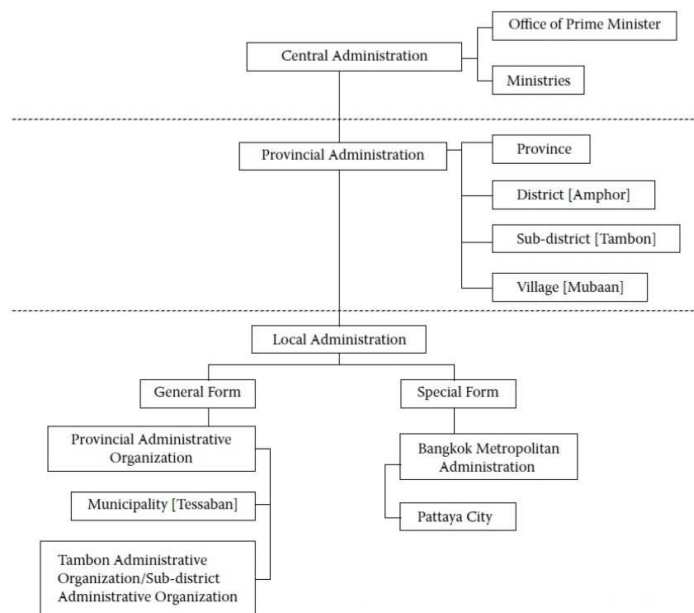
The combination of Thailand administration from three concepts as follows;

- 1) Centralization
- 2) Decentralization
- 3) Deconcentration

Established by the Constitution of Thailand and the State Administration Act, there are three tiers of the administrative structure in Thailand including the central administration, the provincial administration, and local administration. At the central level, there are twenty ministries under the supervision of the Cabinet which play major roles in policy formulation

and implementation. At the provincial level, the administration is a dual system of provincial administration and local administration. The provincial administration combines of Provinces, Districts, Sub-Districts and Villages. The national government delegates some power and authorities to its deconcentrated entities or Provinces and Districts which are in hand of the provincial offices of ministries under the concept of deconcentration. In order to steer and cooperate the operations of numerous governmental agencies in provinces and districts, those provincial offices are headed by a governor and district chief officer who are directly appointed by the Ministry of Interior. On the other hand, the local administration is based on the concept of decentralization where mayors and councils of those local autonomous self-governments are directly selected via local elections allowing them to govern their own local. However, those local autonomous self-governments remain under the supervision of district chief officers, provincial governors and the Minister of the Interior who have the authorities to approve local regulations, local development plans and annual budget plans, local councils, and dismiss local councillors. The local administrative organizations are classified into two types including the general type (Provincial Administrative Organisation, Municipalities, and Sub-district Administrative Organisation); and two special status cities: Bangkok Metropolitan Administration and the city of Pattaya (Alongkot Meekaew, 2017).

The Administrative Structure of Thailand



Source : Alongkot Meekaew, 2017, 14

According to the administration structures of Thailand, therefore, all layers of administrative structures are:

Central Administration consists of ministries, bureaus and departments. The ministries and bureaus are divided into departments.

Provincial Administration consists of 75 provinces (changwat) ; Amnat Charoen, Ang Thong, Bueng Kan, Buriram, Chachoengsao, Chai Nat, Chaiyaphum, Chanthaburi, Chiang Mai, Chiang Rai, Chon Buri, Chumphon, Kalasin, Kamphaeng Phet, Kanchanaburi, Khon Kaen, Krabi,, Lampang, Lamphun, Loei, Lop Buri, Mae Hong Son, Maha Sarakham, Mukdahan, Nakhon Nayok, Nakhon Pathom, Nakhon Phanom, Nakhon Ratchasima, Nakhon Sawan, Nakhon Si Thammarat, Nan, Narathiwat, Nong Bua Lamphu, Nong Khai, Nonthaburi, Pathum Thani, Pattani, Phangnga, Phatthalung, Phayao, Phetchabun, Phetchaburi, Phichit, Phitsanulok, Phra Nakhon Si Ayutthaya, Phrae, Phuket, Prachin Buri, Prachuap Khiri Khan, Ranong, Ratchaburi, Rayong, Roi Et, Sa Kaeo, Sakon Nakhon, Samut Prakan, Samut Sakhon, Samut Songkhram, Sara Buri, Satun, Sing Buri, Sisaket, Songkhla, Sukhothai, Suphan Buri, Surat Thani, Surin, Tak, Trang, Trat, Ubon Ratchathani, Udon Thani, Uthai Thani, Uttaradit, Yala, Yasothon.

The provinces are divided into 878 districts (amphoe), 7,255 rural administrative subdistricts (tambon), 75,032 villages (mooban).

Local Administration or Local Administrative Organization is classified into two types including;

- 1) The general type
 - 1.1) Provincial Administration Organization / PAO (ong kan borihan suan changwat) : 76 organizations.
 - 1.2) Municipalities (thetsaban) : 2,441 organizations.
 - 1.3) Sub-district Administration / SAO (ong kan borihan suan tambon):5,334 organizations
- 2) Special status cities
 - 2.1) Bangkok Metropolitan Administration
 - 2.2) The city of Pattaya

3.2 THAILAND DISASTER PROFILE

Due to its geographical location, Thailand has been highly exposed and vulnerable to natural disasters caused by hydro meteorological hazards such as floods, landslides, storms, droughts, etc. The major disasters that had occurred and claimed hundreds of lives as well as causing significant material loss in Thailand as follows: (DDPM, 2015)

- 1) Flood
- 2) Drought
- 3) Landslides

- 4) Earthquakes and Tsunami
- 5) Storms
- 6) Fires
- 7) Forest Fires and Haze
- 8) Transportation Hazards
- 9) Contagious Disease

The past major disasters are as follows:

- Typhoon Harriet in Surat Thani Province (1962, Death : 911)
- Typhoon Gay in Chumporn Province (1989, Death : 537)
- Major Landslides in Northern and Southern Part of Thailand (1988 and 2001, Death : 361)
- The Indian Ocean Tsunami (2004) had happened in the coastal communities of Thailand's southern provinces along the Andaman Sea rim where the death toll reached 5,395 and 2,817 missing.
- The 2011 Mega Flood (2011 – 2012) was Thailand's most catastrophic flood, 64 out of its 77 provinces including Bangkok, a total of 5,247,125 households or 16,224,304 people were affected; the death toll reached to 1,026 people and total economic damages and losses stood at 1.44 billion Baht (US\$ 45.7 billion approximately).
- Flood in the Southern of Thailand (2016 – 2017) since 1st December 2016 to 12th February 2017, continuous heavy rain influenced by low depression and the strong northeast monsoon have caused a widespread flooding in southern region of Thailand. The flood has affected 12 provinces. The floods have impacted 12 provinces, 129 Districts, 835 Sub-districts, 6,307 villages and affected 587,544 households and over 1.8 million people. Damages have been reported to 99 people were confirmed dead, 4,314 Places of roads, 348 bridges, 126 weirs, 2 reservoirs, 165 government facilities, 2,336 schools and 98 mosques.
- The Minister of Interior decided to raise the level of emergency and incident management to level 3 (Large scale disaster) on January 5th 2017 and set up a front line Emergency Operation and Coordination Centre in Suratthani Province within DDPM regional office. Activation of the National Disaster Command Centre; where the Minister of Interior is appointed as the Incident Commander, is established at DDPM Headquarter.
- Severe Drought : 1979, 1986, 2005 and 2014

3.3 THAILAND DISASTER MANAGEMENT SYSTEM

3.3.1 Overview:

The disaster management system in Thailand is based on the Disaster Prevention and Mitigation Act 2007 (B.E.2550) and the National Disaster Risk Management Plan 2015 (B.E.2558). The national Committee on Disaster Prevention and Mitigation, is composed of disaster management related ministries, agencies as well as the academia, is the top policy making body. The National Committee is chaired by the Prime minister. Department of Disaster Prevention and Mitigation is the Secretariat and executive arms of the National Committee.

3.3.2 Essences of Disaster Prevention and Mitigation Act 2007 (B.E.2550)

This act has come into force on 6 November, 2007. As the principal legal mechanism for disaster management practices in the country, the Act has provided statutory framework to ensure a coordinated and seamless multi – stakeholder collaborative efforts. The essence of this Act includes;

1) Scope of Disaster

Under this Act, “disaster” has been defined to include all types of disasters both natural and man – made in nature, any other incident, or accidents which are harmful to life of people or inflict damage on property of the people and of the state, and also includes air threat and sabotage actions.

2) Disaster Management Structure

Under this Act, disaster management practice in Thailand can be classified into four levels, viz ;

2.1) Policy

To use a plan developed by planning authority at each level as a means to interpret disaster management policy into action which includes ;

- National Disaster Risk Management Plan : This plan has been developed by the National Disaster Prevention and Mitigation Committee.
- Provincial Disaster Risk Management Plan
- Bangkok Metropolitan Disaster Risk Management Plan

Provincial and Bangkok Metropolitan Disaster Risk Management Plans are developed by respective planning committee. Both plans should be consistent with the National Plan, and will come into effect upon an approval of the respective governors.

2.2) Incident Commander Level

- The Prime Minister or the Deputy Prime Minister whom assigned by the Prime Minister is responsible for all commanding functions in the event of catastrophic disaster.

- Interior Minister, as the National Incident Commander is responsible for controlling and overseeing disaster management efforts nationwide according to the National Disaster Risk Management Plan.

- Permanent Secretary for Ministry of Interior, as the Deputy National Incident Commander is responsible for assisting the National Incident Commander in controlling and overseeing disaster management efforts.

2.3) Disaster Management Level

- Central Mechanism : Department of Disaster Prevention and Mitigation has been designated as the lead national agency responsible for realization of integrated and coordinated efforts for disaster management.

- Local Mechanism : Provincial government, district, and local administrative organization (Sub district administration organization, Municipality, Pattaya City, and Bangkok Metropolitan Administration) are responsible for carrying out disaster management activities within their respective jurisdictions.

2.4) Operational Level

The local administrative organization is tasked to function as local emergency response unit and to coordinate emergency management across a range of stakeholders. And in case when the scale and intensity of actual disaster go beyond their capabilities to deal with, they are required to request for assistance and support upwards through the chain of command

3.3.3 Essence of National Disaster Risk Management Plan 2015 (B.E.2558)

This national plan has been approved by the cabinet on 31 March, 2015. Subsequently, all relevant agencies are required to use this plan as a blueprint, framework and guideline in addressing all phases of disaster management in a country. The essence of this national plan includes:

1) Conceptual Framework

Through an application of inclusive disaster risk management concept and building back better and safer principle, this National Plan has been translated into concrete action in a proactive and sustainable manner. Additionally, it has strongly emphasized joint inclusive efforts across all sectors of society to develop and enhance disaster risk management

capacities, promote and strengthen community resilience and preparedness, including promoting inclusive and sustainable post – disaster recovery and reconstruction and international cooperation for disaster risk management to meet internationally recognized standards.

2) Disaster Risk Management Strategy

2.1) Focusing on Disaster Risk Reduction

2.2) Applying Integrated Emergency Management

2.3) Enhancing the Efficiency of Sustainable Disaster Recovery

2.4) Promoting International Cooperation for Disaster Risk Management

3) Level of Emergency and Incident Management

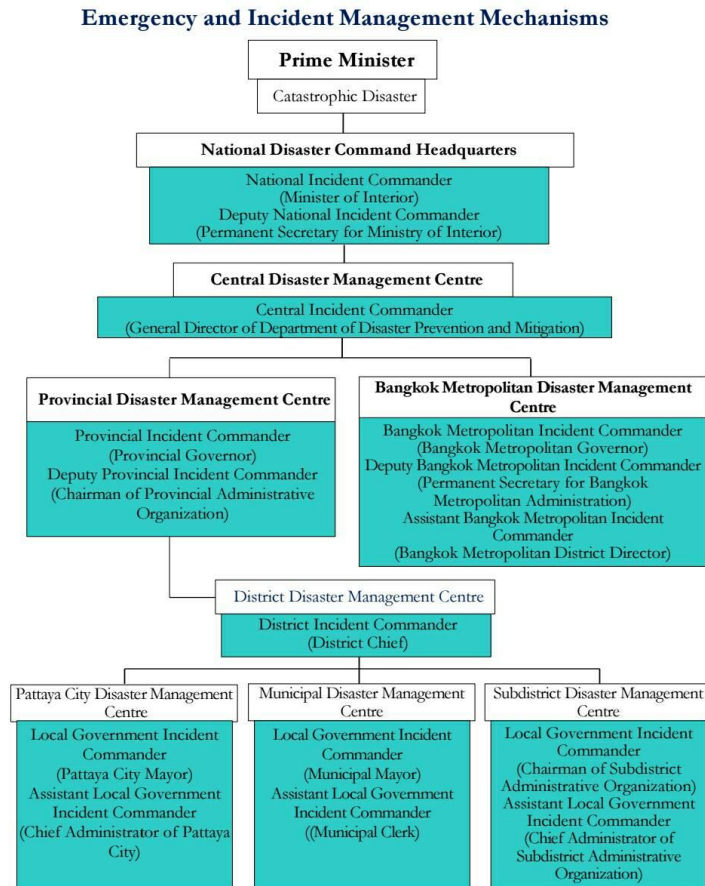
In Thai context, level of emergency and incident management is classified into four levels based on a wide range of parameters, including areas affected, size and severity level and complexity, number of population, existing capacity for emergency management as well as the availability and capability of resources. The activation levels are as follows:

Level	Management of	Person Authorized
1	Small – scale disaster	District Incident Commander, Local Government Incident Commander, and/or Bangkok Metropolitan Assistant Commander is in charge of directing and/or controlling functions
2	Medium – scale disaster	Provincial Incident Commander or Bangkok Metropolitan Incident Commander is in charge of directing, controlling and commanding functions
3	Large – scale disaster	National Incident Commander is in charge of directing, controlling and commanding functions
4	Catastrophic disaster	The Prime Minister or the Deputy Prime Minister whom assigned by the Prime Minister is in charge of directing, controlling and commanding functions

Source: DDPM

It is essential to make use of one of or the combination of the aforementioned parameters when submitting a proposal for upgrading the level of emergency and incident management to level 3 or level 4 to be considered by the National Incident Commander or the Prime Minister respectively as the case may be.

4) Emergency and Incident Management Mechanisms



Source: DDPM

CHAPTER 4: SAFETY CULTURE NETWORKING

4.1 INTRODUCTION

Defining “safety culture” has been a problem because its definitions are different dimensions of each organization culture.

The term safety culture can be traced back to the 1986 nuclear explosion at Chernobyl, two explosions led to the release of molten core fragments of the Chernobyl-4 nuclear reactor and fission products into the atmosphere. It is noted as one of the worst commercial nuclear power accidents in history. The International Safety Advisory Group (INSAG), an advisory group to the International Atomic Energy Agency (IAEA) tasked with investigating the Chernobyl accident, used the term “poor safety culture” to identify factors contributing and leading up to the Chernobyl accident (Cole, Stevens-Adams, & Wenner, 2013)

INSAG defined safety culture as safety culture is that assembly of characteristics and attitudes in organizations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance. This statement was carefully composed to emphasize that safety culture is attitudinal as well as structural, relates both to organizations and individuals, and concerns the requirement to match all safety issues with appropriate perceptions and action (INTERNATIONAL ATOMIC ENERGY AGENCY, 1991)

Although INSAG borrowed the term ‘culture’ from anthropologists, there is no mention of any other bodies of literature in their report. Thus, it can be inferred that the safety culture literature did not originally develop theoretically from organizational culture. INSAG claimed that ‘the phrase safety culture refers to a very general matter, the personal dedication and accountability of all individuals engaged in any activity which has a bearing on the safety of nuclear power plants’. However, the group left the meaning of the term open to interpretation and did not provide guidance as to how this construct could be assessed; a fact that still plagues this concept today. (Cole et al., 2013)

INSAG defined safety culture as “that assembly of characteristics and attitudes in organizations and individuals, which establishes that, as an overriding priority, nuclear power plant safety issues receive the attention warranted by their significance.” This definition highlights two major points: First, while safety culture is about good safety attitudes, it is also about good safety management established by organizations and second, good safety culture means assigning the highest priority to safety. The INSAG report presented the concept of safety culture as it related to both organizations and individuals, but it did not provide a link between safety culture and measures of safety performance. Safety culture represents long-term attitudes, beliefs and the stable ways in which people behave (Cole et al., 2013)

A variety of definitions has been proposed, a widely cited working definition being suggested by U.K. Health and Safety Commission “the product of individual and group values, attitudes, perceptions, competencies, and pattern of behavior that determine the commitment to, and the style and proficiency of, and organization’s health and safety management” (Gledon, Clarke & Mckenna, 2016)

As its definition depends on individual perceptions being shared within group, organizational or society context, safety culture is essentially a social phenomenon. This feature is reflected in many definitions, for example, Cox and Cox (1994) and HSC (1993a) both referred to “shared perceptions of safety” and Cooper and Philips (1994) to “a collective commitment of care and concern” Definition of organizational culture also emphasizes its shared or social nature (Bate, 1984; Schien, 1985). However, Turner (1991) noted that whilst safety culture has important social dimensions it also has technical aspects, which should not be overlooked; he emphasized the nature of safety culture as sociotechnical rather than wholly social. (Gledon et al, 2016)

Eedgar H. Schien said that culture can be analyzed at several different levels, with the term level meaning the degree to which the cultural phenomenon is visible to the observer. These level ranges from the very tangible over manifestations that you can see and feel to the deeply embedded, unconscious and basic assumptions. In between these layers are various espoused beliefs, value, norm and rules of behavior that members of culture use as way of depicting the culture to themselves and others. The three major level of culture analysis are:

1. Artifacts
 - Visible and feel able structures and processes
 - Observed behavior
 - Difficult to decipher
2. Espoused Beliefs and values
 - Ideals, goals, values, aspirations
 - Ideologies
 - Rationalizations
 - May or may not be congruent with behavior and other artifacts
3. Basic Underlying Assumption
 - Unconscious, taken – for granted beliefs and values
 - Determine behavior, perception, thought, and feeling

Tuangporn Wonengtrakul said that even if the definition of Safety which is thinking and believe that imbedded in member of organization that used to be operational guideline by do not write to be procedure. Safety culture is a sub culture of corporate culture that highlighting the organization should have a strong culture that can lead to be successful.

Due to safety culture is a part of cooperate culture. Safety culture is encapsulated by cooperate culture that expresses its characteristics according to scope or restrictions related to safety. Thus, defining safety culture are different dimensions of each organization culture.

As DDPM by Disaster Prevention and Mitigation Policy Division has definition of safety culture for driving “Safety Thailand” agenda that safety culture means the behavior of people in society that shows the nature and attitude about safety. The important factor of strengthening safety culture is raising a sense of safety (Safety Mind) that means creating incentive and inspiration to people in safety living as well as creating consciousness and behavior in safety living without force.

Therefore, in term of this research is about safety culture related disaster risk reduction and disaster management.

4.2 SAFTY CULTURE NETWORKING IN JAPAN

Main stakeholders in Japan disaster management are three sectors as follows:

1. Public sector
 - 1.1 National government
 - 1.2 Local government
2. Citizen sector / civil sector
 - 2.1 Community Disaster Organization
 - 2.2 Individual Volunteer
 - 2.3 NPOs and NGOs
3. Private Sector
 - 3.1 Private companies

One interesting characteristic of Japanese disaster management system is the assumption that public-sector organizations (mainly national and local governments) serve as the key actors in a disaster. This assumption and experience of two major disasters has undergone a significant change based on the experience of two major disasters in the past two decades: the 1995 Kobe earthquake and the 2011 Tohoku disaster. Both within the official disaster – management framework as well as among the general public, that civil society organizations play a vital role in managing risk disaster. (Okada, 2015)

The 1995 Kobe earthquake was the first key momentum for such change. Contributions by volunteers and voluntary organization in disaster response and reconstruction came to be widely recognized. Masaaki Honma and Masayuki Deguchi called this phenomenon a “volunteer revolution” (1996). In response to the claim that effectiveness and efficiency of these organizations will greatly enhance with official recognition, the government of Japan enacted its first law for nonprofit organization in 1998 (Law to Promote Specified Nonprofit

Activities). The number of organizations that have gained legal status under this new law has steadily risen. The term “NPO” is now widely used around Japan. When earthquake and tsunami struck northeastern Japan in 30111, civil society organizations were again very active. The government of Japan is now taking steps to recognize the role of civil society organizations in its disaster management system and plans. (Okada, 2015)

To provide a supportive environment for disaster reduction volunteer activities, the Cabinet Office provides information volunteers can use in their efforts, as well as facilities for the exchange of information and views. The Cabinet Office also provides local governments receiving volunteer assistance with information and expertise, and promotes wide area collaboration among volunteer activities when disasters strike. (Cabinet Office, 2015)

Disaster Countermeasures Basic Act had stipulated improvement of the environment of the volunteers’ disaster reduction activities as one of the issues that national and local governments have to consider. However, in recent disasters including Great East Japan Earthquake, many volunteers have proactively worked hard and played important roles. Such roles are expected to grow even further in the anticipated large-scale disasters occurring. (Cabinet Office, 2015)

As such, in view of the importance of volunteers’ work, it was clearly defined that, the national and local public entities must work closely with volunteers while respecting their autonomy, in the new version of the Basic Act in 2013. (Cabinet Office, 2015)

Creating safety culture in Japan Communities is disaster reduction activities of citizen sector/civil sector. Dr. Shohei Beniya said the type of Civil Sector organizations as shown:

	Characteristics	Examples
Local organizations (Communities)	- Organization in community or neighborhood, that bound by common destiny (bilateral)	- Neighborhood community (Neighborhood association) - Parent-teacher association - Women’s society - Local voluntary organization for disaster prevention
Special interest organization (Association, Multi-regional organization)	- Organization bonded by special interest or voluntary activities (Unilateral)	- Voluntary organizations, NPO,NGO - Professional organizations like

	Characteristics	Examples
		engineer or medical staff - Special interest organization like welfare or international exchange
Intermediary (Support or coordinate organization)	- Organizations which support other civil organization in finance or information)	- Intermediary - Disaster Voluntary Center - Social welfare council

Types of Volunteer Organization as mutual aid in local communities in Japan are as follows:

- 1) Community Disaster Organization
 - 1.1 Community Firefighting Team : 856 thousands members (Female Fire Corp Volunteers : 23,899 members (2016)¹
 - 1.2 Community Flood Prevention Team : 14.105 thousands members ²
 - 1.3 Local Voluntary Organization / Voluntary DRR Organization : 161,847 organizations (2016)³
- 2) Individual Volunteer: approximately 1,417,000 people (December,2014) at the Great East Japan Earthquake ⁴
- 3) NPOs and NGOs

1) Community Disaster Organization

Disaster Countermeasures Basic Act (1961) assigns that for policy consideration, the nation government and local government shall encourage people to engage in voluntary disaster prevention activities by fostering voluntary disaster prevention groups and shall enhance the environment for disaster prevention. And this act assigns the mayor of the city or town or the head of the village shall effort to develop fire department, flood brigade and other organizations, and to improve disaster relevant organization and Voluntary DRR Organizations in the municipality and promote voluntary disaster risk reduction activities of residents in order to fully utilize functions of municipality.

¹ White Paper Disaster Management in Japan 2017

² White Paper Disaster Management in Japan 2017

³ White Paper Disaster Management in Japan 2017

⁴ Documents of Manabu Sako, Chairman of National Volunteer and Civil Service Promotion Center Manager of Regional Welfare Department of Japan, National Council of Social Welfare (Social Welfare Service Corporation)

Community Disaster Organizations which are people to engage in voluntary disaster prevention activities. Government and local government shall encourage their activities. There are Community Disaster Organizations in Japan as follows:

1.1) Community Fire Fighting Team

Fire Fighting System in Japan are under the Fire Defense Organization Law (1947), assigning the principle that fire services are based on local government (cities, towns and villages) and cooperation from the national government, prefectural government and municipality. Major activities are Firefighting Operation, Rescue Operation, Flood Prevention Operation Activities, Fire Prevention and Ambulance Operation.

Fire and Disaster Management Agency (FDMA) as national government is responsibility for prevents or mitigates damage due to various disasters including fires, earthquakes, storms, and floods. In part of fire service, its duties are basic firefighting measures and policies, providing technical advices and education and training, conducting research and effective use of emergency fire response teams during large-scale disaster.

Fire Departments are under each prefectures and municipality. Fire Departments in prefectures provide fire defense education and training; some of them have their own school. And Fire Departments in municipalities (cities, towns and villages) have initiate fire service unit and carry out initiate fire service activities.

Community Fire Fighting Teams are acting under the slogan “Protection of our community by ourselves”. Their duty is carrying out fire defense activity in community; they initiate response to disaster on the front line. Likewise the fire departments and stations, volunteer fire corps in Japan also are organized by municipalities. Different from the first two, volunteer fire fighters are not professionals and engaged in firefighting as secondary occupation. The fire corps is independent from the fire departments and fire stations and there are no top-down relationships between these two. However, in cases of where the fire corps are called out in emergencies, they must follow the orders of the chief of the fire department or fire station. For the volunteer fire corps, the basic rule is one corps in one municipality. However, there are municipalities that have established more than one corps (most of “designated cities”) and those that have not established the corps (Osaka city, and some towns and villages in Aichi Prefecture). (NAZAROV, 2011)

Every member of the volunteer fire corps has their own regular job, but are active day or night protecting their own town by themselves, deeply rooted in the spirit of their devotion to their hometown. While they are involved in firefighting activities, they are also there to protect the lives, physical being and properties of local residents from natural disasters such as earthquakes, wind and water damage through rescue efforts, warning patrols and evacuation guidance. even when there is no disaster present, volunteer fire corps organize numerous community-based activities designed to improve fire and disaster

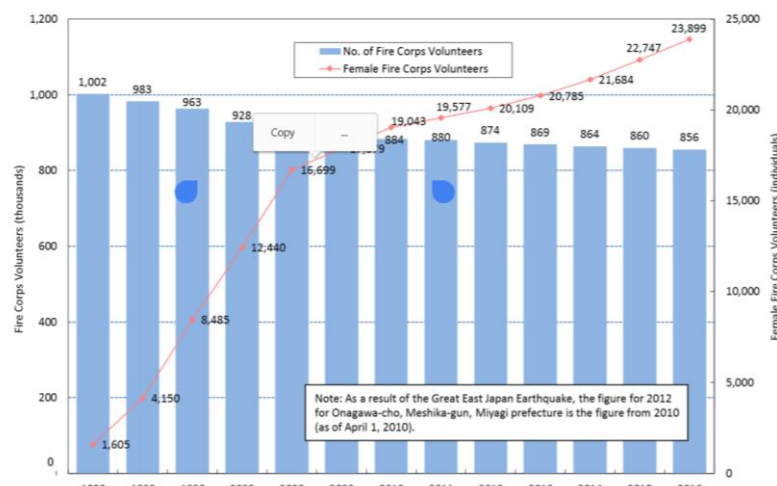
prevention capabilities, as well as rejuvenating their local community. Female volunteer fire corps participate in areas that have been predominantly female-oriented, including home visits to elderly people for fire prevention, and holding fire prevention classes at kindergartens and elementary schools (FDMA)

They are not complete voluntary organization but they are special part-time local government officers. Unlike firefighters who engage in firefighting professionally, they are local residents who have their own professions and also participate in the volunteer fire corps.

Moreover, if they are damaged by disaster, they or their family can get compensation from government. For example, Volunteer Fire corps member in Tokyo Metropolitan Government will receive:

- Rewards, etc.: They receive a specific salary every year, and receive compensation when they engage in disaster relief activities and training.
- Official duty subsidies: When they are injured during their duty, there are compensation systems for damages during official duty.
- Awards: According to their merits and achievements, the director-general of the TFD and the governor of Tokyo can give awards.
- Retirement allowance: After a certain period of time, retirement allowance will be paid after leaving the volunteer fire corps.

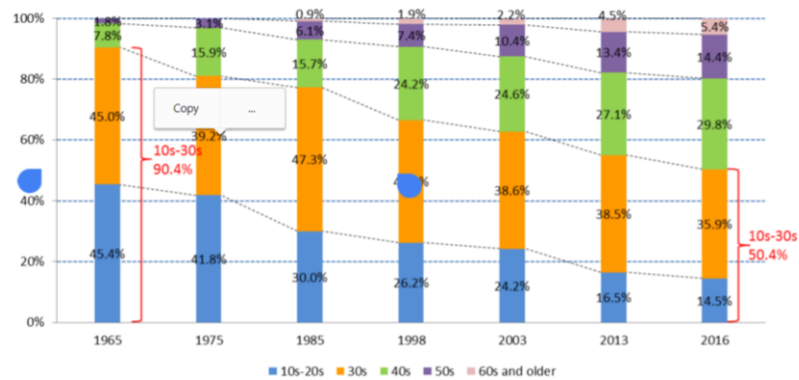
Trends in Numbers of Fire Corps Volunteers



Source: Produced by the Cabinet Office based on the Survey on the Current Status of Fire and Earthquake Disaster Management Measures of the Fire and Disaster Management Agency

Source: White Paper Disaster Management in Japan 2017

Trends in Age Composition Ratios among Fire Corps Volunteers



Source: Produced by the Cabinet Office based on the Survey on the Current Status of Fire and Earthquake Disaster Management Measures of the Fire and Disaster Management Agency

Source: White Paper Disaster Management in Japan 2017

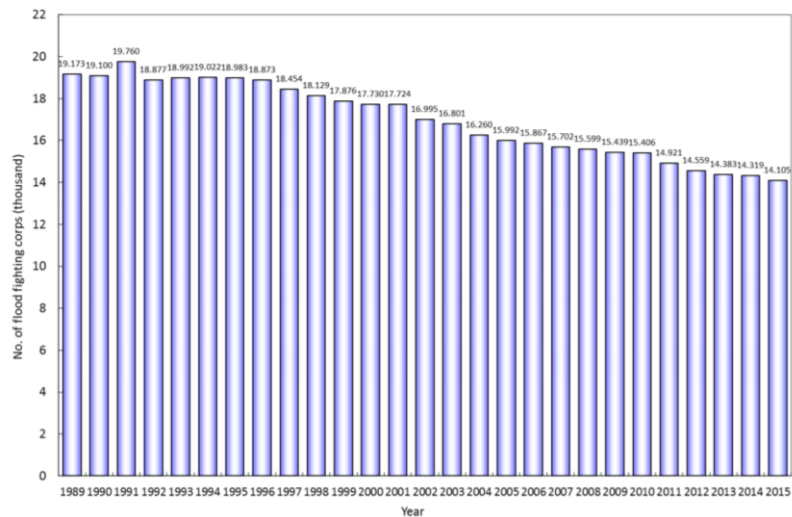
1.2) Community Flood Prevention Team

In Japan, people have long worked on flood-prone alluvial plains and carried on various types of productive activities to sustain their lives. The historical experience of the Japanese has developed two principal components of flood risk management: (i) "flood control" (Chisui) by means of river improvement and (ii) "flood fighting" or "flood damage prevention" (Suibo) as a human activity to protect human lives and property from ongoing and approaching flooding to minimize the damage. (IWR, 2011)

Flood fighting activities are conducted by volunteer-based flood fighting teams which are commonly established in each municipality. A flood fighting team is developed and managed by the traditional self-governing body of a village, etc. Its members are normally engaged in different jobs but are also involved in patrolling, watching out and levee protection work. During peace time, they still conduct patrols and the inspection of levels, provisions for flood fighting warehouse and for communication facilities, drills and other activities in preparation for a flood. (IWR, 2011)

They are not complete voluntary organization but they are special part-time officer and receive very few salary. Moreover, if they are damaged by disaster, they or their family can get compensation from government. They are under Law on Flood Prevention.

Trends in Numbers of Flood Fighting Corps Personnel



*Number of full-time flood fighting corps personnel
Source: Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

Source: White Paper Disaster Management in Japan 2017

1.3) Local Voluntary Organization / Voluntary DRR Organization

Local Voluntary Organizations are community based. They are various and established by residents and community organizations such as neighborhood community, neighborhood association, women’s society, resident association of condominium/school zone, etc. These volunteers work based on the spirit of neighborhood cooperation and do not get any salary or any compensation. However, the municipality can subsidy to them for purchasing equipment and provide compilation of guidebooks to organize Local Voluntary Organization

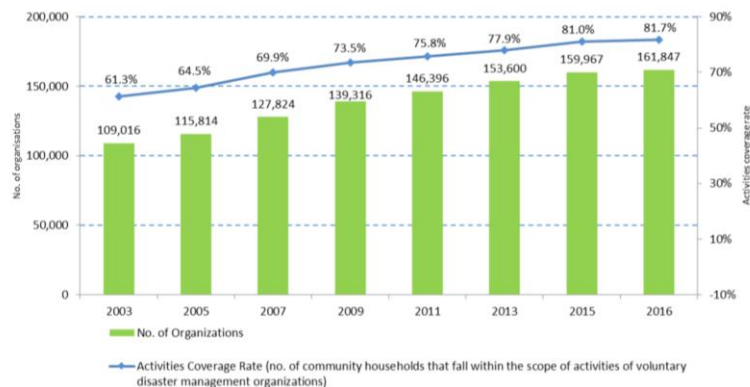
They are responsible for various activities for disaster prevention as follows:

Group Name	Role at usual condition	Role at disaster time
General	<ul style="list-style-type: none"> - Coordination and Report - Information management of the vulnerable people 	<ul style="list-style-type: none"> - Coordination and Report - Information management of damage, shelter, etc.
Information	<ul style="list-style-type: none"> - Information collection - Sending message 	<ul style="list-style-type: none"> - Information collection - Sending message

Group Name	Role at usual condition	Role at disaster time
Fire Extinction	- Checking equipment - Fire prevention education	- First fire extinction activities
Search and Rescue	- Organizing and checking equipment	- Search and rescue aid
Evacuation	- Organizing and checking evacuation route and signs	- Evacuation support for residents
Food and water	- Checking equipment	- Distribution of food and water - Kitchen management

Source: Documents of Dr. Shohei Beniya

Trends in Voluntary Disaster Management Organizations



Source: Produced by the Cabinet Office based on the Survey on the Current Status of Fire and Earthquake Disaster Management Measures of the Fire and Disaster Management Agency. Figures as of April 1 each year.

Source: White Paper Disaster Management in Japan 2017

2) Individual Volunteer

Individual Volunteer means individuals who go to affected areas at their own initiative to provide those affected by the disaster with support, without being affiliated to an organization of some kind are referred to here as individual volunteers. In most cases, the task of receiving these individual volunteers and allocating duties to them is carried out by the Disaster Volunteer Centers established by social welfare councils in disaster afflicted areas. (White Paper Disaster Management in Japan, 2017)

Municipalities and prefectures have each their Social Welfare Councils which are special NPOs authorized by Social Welfare Act. Social Welfare Councils shall establish Disaster Volunteer Centers which is temporary organization to coordinate individual volunteer in each affected area. When individual volunteers register with Disaster Volunteer Centers, they shall receive volunteer accident insurance .At present some Disaster Volunteer Centers have permanent organizations such as Mie and Kyoto, they provide education program in normal situation.

Disaster volunteer centers are established in affected areas and volunteers participate in relief activities. These centers seek relief activities by focusing on victims and making efforts to participate in timely activities via networks. Their major role is coordination between welfare organizations, welfare experts and local government including managing their own welfare facilities and providing welfare services.

3) NPOs and NGOs

A nonprofit organization (NPO) is different from an administrative agency, the activities of which are supported by taxes and which aims to provide social services evenly and fairly to everyone. NPOs, as their name implies, also differ from corporations in that profits are not their goal.

In 1995, the Great Hanshin Earthquake is the key momentum, NPOs and NGOs were active and played important role to support affected people instead of damaged municipalities. There were some organizations established for supporting affected people. NPOs and NGOs could visit and support immediately, because they had experience and strong back up system. They played some public roles delegated by local governments and requested the government to authorize NPOs by law.

Non – Profitable Organization Law was established in 1998. The purpose of this law is to promote the sound development of specified nonprofit activities in the form of volunteer and other activities freely performed by citizens to benefit society, through such measures as the provision of corporate status to organizations that undertake specified nonprofit activities, (as well as establish a system to recognize specified nonprofit organizations that are contributing to the advancement of the public welfare and whose management system and activities are reasonable) and thereby to contribute to advancement of the public welfare.

The legal status of the NPO Law is as a special law under Article 34 of the Civil Code, which prescribes the establishment of public interest corporations. Although public interest corporations are part of a system under the competent authorities, NPOs are different in that they acquire their nonprofit corporation status through a system of certification under the concerned authorities (similar to a standards-based approach). As it is a special law

under the Civil Code, however, nonprofit activities are restricted to specific areas.

In part of tax issues, the first is corporation tax. The duty to pay certain taxes arises upon incorporation as an NPO. NPOs are generally exempt from the corporation tax (a national tax), but any income they have from profit-making activities as stipulated under the Corporation Tax Law is subject to the same tax rate as a company. NPOs must file the required corporation tax paperwork at the tax office. The second is tax system for donations. No particular tax benefits are available if an individual or a corporation makes a donation to an NPO. The following tax breaks are provided in the case of donations made to a certified NPO.

Although NPOs have corporate status and manage their estate, tax, collecting donation, etc. but NPOs' operation is different from the government that they can support affected people freely and without equally. But the government must support affected people equally.

In addition, the one momentum of the Great East Japan Earthquake of 2011 is Japan Voluntary Organizations Active in Disasters (JVOAD) established in 2016 for supporting NPOs and NGO to coordinating of sharing information by assessing unidentified affected people and solving remaining problem as well as making connection with people, materials, fund, and information to those who require them as well as creating opportunities to collaborate such as training, lecture, national forum, etc. (Original model is NVOAD in USA)

The Japan Voluntary Organizations Active in Disaster (JVOAD) enhances collaboration among the government sector, the NGO/NPO sector, and the corporate sector in order to respond more effectively and collaboratively against future emergencies in Japan. JVOAD coordinates assistance between supply from NPO/NGO and demand of survivors in disasters, and between local governments and NPO/NGO. Ordinary time, JVOAD conducts exercise of coordination and offering opinion to governments.

Activities of JVOAD are as follows:

1) Activities at affected area

At disaster time, working as coordination function together with stakeholder in affected area for promoting support activities in accordance with local need without missing or bias support

- To make total assessment of needs of the affected people / residents /communities and support situation
- To share information with support organizations and make coordination among support organizations
- To make recommendation of support for reconstruction and recovery and evaluation of overall support.

- 2) Activities at ordinary time
- Preparedness for coming disaster
 - To strengthen collaboration with civil sector including NPOs, volunteer center, etc.
 - To strengthen collaboration across supporter including business, public, academic and civil organizations.
 - To create relationship with communities and strengthen network.

4.3 SAFETY CULTURE NETWORK IN THAILAND

National Disaster Risk Management Plan 2015 assigns the one target of disaster risk management is to increase public safety awareness through highlighting the creation of body of knowledge, awareness, and safety culture as well as developing local and community capacity gearing towards building community resilience to disasters.

Above target is consistent nationwide concept of operations to enable national and local administrative organization, private sector, and other sectors of society to collectively implement disaster management activities in an integrated and systematic manner, and in the same direction. And it is to compile the current internationally – recognized guidelines and directions and are used worldwide for disaster risk management that can be applied to disaster risk management in Thai context and to be used in the development of relevant plans at different levels of government such as Provincial Disaster Risk Management Plan, Bangkok Metropolitan Administration Disaster Risk Management Plan, including Disaster Management Action Plan of the local administration organizations and Emergency Support Function Plans to enable these local authorities to more efficiently and effectively deal with disasters. Moreover, it is to develop and enhance capacities for disaster risk management which encompasses disaster risk reduction, emergency management and building back better and safer at community, local, national and international levels to further minimize the potential losses from disasters.

This article comprises of agenda on SAFETY THAILAND Policy and Projects and Activities related safety culture networking in Thailand community.

4.3.1 Agenda on SAFETY THAILAND Policy

The Industrial Revolution marked a major turning point in the world. Thailand has developed industrial rapidly and regardless of social and environmental impacts. It has social, economic and cultural impacts in life aspect of human.

The most noticeable is that the average income and population increase rapidly leading to expansion of urban areas, social change and coming into a population aging society and migration. These cause many social problems such as traffic accidents, habitat,

slum, pollution, and spread of germs, crime, child labor, insecurity in workplace, etc. In addition, the industrial revolution also resulted in the climate change caused by increasing of greenhouse gases which is due to the expansion of the manufacturing. All of the above-mentioned problems lead Thailand faces increasing disaster risk as "Natural disasters" and "human-induced disasters", and also more complexities in disaster risk management

Disaster cause huge impact on Thailand including economics such as Thailand's income declined, the profit of sectors declined such as industry and tourism. The government assumes the expenses for affected people, famine and recovery. Moreover, there is affected agriculture as agriculture, farm, animal husbandry, animal transport, as well as seed storage, barn plants. There are social impacts, such as hazards and damage of life and property, dwellings, lack of income and utilities damaged such as Telegraph, telephone, electricity, water supply and drainage systems. Public buildings damaged, such as bus stations, airports, schools, temples, architecture and fine art. It also damages public health, risk of pandemic such as foot bites cholera including stress, anxiety. And environmental impact, degradation of resources and environment ecological and food chain imbalances and food shortages.

Therefore, to prepare for increasing disaster risk, the prime minister mandated Department of Disaster Prevention and Mitigation (Ministry of Interior) to be the principal government agency to integrate the enhancement of safety standard and knowledge creation so as to sustain Thailand's habitability safety which under "SAFETY THAILAND" leading Thailand to be safety for living and tourism and ready for prompt and effective response.

Since 2015, Thailand is under policy of "SAFETY THAILAND" which accelerates the building of safety culture in Thai society and compels cooperation in concrete management in all sectors and all agencies of Thailand in order to achieve the important goals for providing safety to Thai people. DDPM, as the central government agency to operate any related activities on national disaster prevention and mitigation, realizes the importance of developing safety culture in Thailand and to push forward "SAFETY THAILAND"

DDPM by Disaster Prevention and Mitigation Policy Division has imposed the principle for driving "SAFETY THAILAND" agenda as follow

1. Related Concepts.

There are 4 related concepts for driving "SAFETY THAILAND" policy as follow:

- 1) The Sufficiency Economy Philosophy of His Majesty the King of Thailand.
- 2) Sustainable Development.
- 3) Sustainable Development Goals (SDGs).
- 4) Disaster Risk Management.

Due to change of economic, social and environmental, Thailand has a higher disaster risk. The Sufficiency Economy Philosophy is a major development concept to get off with these problems. Characteristic of Sufficiency Economy Philosophy is self – immunity which is preparing for the impacts of change by considering the possibility of situations in the future. This philosophy is in line with Sustainable Development Concept accepted worldwide. Sustainable Development has three basic components as follows: economic, social and environmental and all three elements are related.

At present, the United Nations has set development goal based on conceptual framework of economic, social and environmental dimensions. Sustainable Development Goals (SDGs) is the development directions since September 2015 to August 2030, with cover a 15-year period, and comprising 17 targets. For example, the 3rd Goal ensures healthy lives and promotes well-being for all at all ages. The 6st Goal ensures access to water and sanitation for all. The 8th promotes inclusive and sustainable economic growth, employment and decent work for all. The 13th takes urgent action to combat climate change and its impacts. And the 17th revitalizes the global partnership for sustainable development.

For Disaster Risk Reduction (DRR), currently approved by international organizations, is the "Disaster Risk Management (DRM)" principle for Prevention, Mitigation and Preparedness and Emergency Management, Response ,Relief, Recovery (Rehabilitation and Reconstruction) ,and Build Back Better and Safer.

Driving agenda on SAFETY THAILAND is consistent with the Philosophy of Sufficiency Economy which is the main concept of Thailand development and also the concept of Sustainable Development and Disaster Risk Management. All lead to achieve the Sustainable Development Goals (SDGs) which is the main target of development in 193 countries of the United Nations, was adopted on 25 September 2015.

2. Definitions, concepts and scope of action.

DDPM by Disaster Prevention and Mitigation Policy Division prescribes “SAFETY THAILAND” framework” is to develop Thailand to safety in all areas trough collaboration for disaster risks reduction and building immunity aiming to good quality of life and sustained growth. Driving the “SAFETY THAILAND” agenda has related sections as follow:

- 1) Agriculture
- 2) Tourism industry
- 3) Industry, trade and investment
- 4) Infrastructural
- 5) Education
- 6) Public health
- 7) Housing

3. Driving scheme

There are 2 main schemes to driving “SAFETY THAILAND” agenda;

1) To develop Safety Standard

“Safety Standard” is documents related to building safety by mutual agreement and acknowledge organizations have approved it. These are general rules, guidelines, or characteristic or result specifications of activities which are used as the rules. Therefore, sectors need to develop and emphasize safety standards for implementation guideline of disaster risk reduction.

For International Standards on disaster risk management, Sendai Framework for Disaster Risk Reduction (2015 – 2030) is a framework adopted by many countries. It focuses on disaster risk reduction and reducing loss of life, health and well-being, and loss of physical, social, environmental assets of individuals, businesses, communities and countries. The goal is to prevent new risks and reduce the risk with integration by part of economic measures, structures, laws, health, culture, education, environment, technology, politics, and institution approach, as well as disparity reduction to prevent and reduce exposure and vulnerability, and also response preparedness and rehabilitation. These lead to prompt and effective countermeasures.

As part of Thailand's Standard are as follows: the Disaster Prevention and Mitigation Act 2007 (B.E.2550) is the basic law in disaster risk management which is mechanism to drive agenda on "SAFETY THAILAND ". This Act assigns the Department of Disaster Prevention and Mitigation (DDPM) to formulate Thailand's national plan in disaster management. National Disaster Risk Management Plan B.E. 2558 (2015), approved by the Cabinet on March 31, 2015, is the implementation of development concept of prevention, preparedness and creating immunity system by developing knowledge and strengthening the community in monitoring and responding disaster, living in harmony with nature and creating the self – immunity to the communities in line with an approach entitled “sufficiency economy philosophy”. As well as, the concept of Sendai Framework on disaster risk reduction is resilience through creating and enhancing awareness of disaster risk reduction (before, during and after disaster) and proceedings according with the Disaster Prevention and Mitigation Act 2007 (B.E.2550).

Moreover, Thailand has specific rules, regulations and laws relating to safety for specific areas or sectors, such as the Occupational Safety and Health Act 2001, the Building Control Act 1979 and the National Accident Prevention Policy.

It can be said that International Standards and Thailand's Standard are both imperative to emphasize that all sectors comply with strict standards leading Thailand to be safety and sustainable city through the mechanism of the National Disaster Prevention and

Mitigation Plan And the national accident prevention plan which are for action framework.

2) To promote safety culture

Safety culture means the behavior of people in society that shows the nature and attitude about safety. The important factor of strengthening safety culture is raising a sense of safety (Safety Mind) that means creating incentive and inspiration to people in safety living as well as creating consciousness and behavior in safety living without force.

Awareness is cannot be created or cultivated in a short period of time. But it is molded with a personality for a long time to create a consciousness and behavior since a child born and educated by parenting, school, various materials and workplace.

As an approach for Safety living in individual and communities need to be serious cooperating with all sectors and promoting safety behavior which is to encourage the public in all activities.

There are two methods to creating “safety culture” in Thailand; the first is to educate people to understand it for raising awareness and changing behavior and cultivating safety culture. Theses lead to changing society for the better. The second is to formulate regulations rules and orders for encouraging people to change behavior and society. Finally, all these lead to safety culture in Thailand.

4. Using Pracha Rat Mechanism to drive the policy

Pracha Rat Mechanism is driving disaster management through people-centered development and promoting all section in disaster reduction as well collaborating with network to disaster countermeasure including encouraging people to have knowledge, awareness and participate in disaster management.

Using Pracha Rat Mechanism to drive “SAFETY THAILAND” policy is to encourage all sectors participate in development through Good Governance. A combination of Pracha Rat from four sections as follows:

- 1) Government sector as the government , government agencies and public officer
- 2) Public sector as people, student, village headman and civil defense volunteer
- 3) Private sector as industrial, trade, investment, companies, foundations, non-profit organizations and materials
- 4) Local administrative organization

For example, driving “SAFETY THAILAND” in the school by the various sectors can use the principle of the public as follows:

Government sector consists of the ministry of education, province, education institution, school, teachers, education staff and related government agencies. They should drive policy by safety course creation and safety standard establishment in school. Their

activities should be making disaster prevention and mitigation plan for school, creating safety course, increasing school safety standard, enhancing capacity of teacher to educated student and creating collaborative network.

Public sector consists of student, parent, people and communities near school. They are responsible for study creation, work collaboration and safety promotion in school. Their activities are educating and developing knowledge and skill of safety, practicing in line with Safety, participating in drill and activities related promoting safety, educating safety knowledge to family and communities and creating collaborative network.

Local administrative organizations are responsible for promotion and observation in school safety. Their activities are making Disaster Management Action Plan of the local administration to usually drill, enhancing staff to be ready for training and participating in drill and activities related promoting safety including preparedness for emergency response.

5. Goals

1) Short-term goal: To decrease loss of life and property

2) Medium – term goal: To increase amount of sectors certified by international safety standards.

3) Long – term goal: People are satisfied. Thailand has a sustainable development in line with the SDGs.

4.3.2 Projects and Activities related Safety Culture Networking in Thailand.

Network in community is initiate unit of disaster managements. The one approach to create safety culture is building and development of partnership network

DDPM, as the central government agency to operate any related activities on national disaster prevention and mitigation, focuses on the mechanisms of disaster management in communities though enhancing and developing network to support various missions as monitoring, warning emergency response, search and rescue and assistance to Victims. Now, DDPM realizes the importance of developing safety culture in Thailand and efforts to develop safety culture through networking.

The Disaster Prevention and Mitigation Act 2007 (B.E.2550), Section 20 stipulates that a local administrative organization of locality shall perform the duties on disaster prevention and mitigation operation within the respective local jurisdiction under the responsibility of an executive of such local administrative organization of specified locality whom appointed as the Local Director. In addition, the local administrative organization shall perform the duties to assist the Provincial Director and the District Director as entrusted.

The concept of modern disaster management addresses the importance of disaster risk reduction by focusing on people and community to participate in every operations of disaster management .Local administrative organizations are the closest to the people in community and also have the legal authority to support and promote people, networks and volunteers in the community to participate in disaster management projects/activities of DDPM.

Recognizing the importance of proactive disaster risk management approach, DDPM has continuously developed and strengthened its partnership networks, and has involved them in all phases of disaster risk management. These partnership networks are as follows:

- 1) Civil defense volunteer : 1,241,718 people
- 2) OTOS : 76,772 people
- 3) Rescue Volunteer in Charitable Organization : 55,000 people / 400 organizations
- 4) Mr. Warning : 29,281 people
- 5) Communities Based Disaster Risk Management (CBDRM) : 12,095 community / village
- 6) Student Network : 10,650 people
- 7) Disaster Resilient Community : 350 community / village

Each network is unrelated.

1) Civil Defense Volunteer

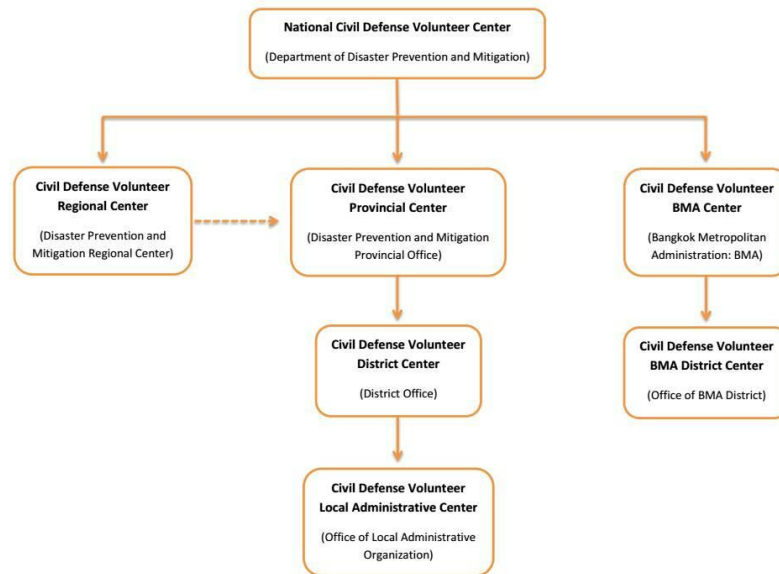
By the virtue of Civil Defense Act 1979 (B.E. 2522) (and was abolished in 2007), Civil Defense Volunteer corps has been organized in March 22, 1979. The main duty of Civil Defense Volunteers is to fulfill a range of roles in disaster risk management, including disaster preparedness, emergency response, search and rescue, evacuation, and disaster relief assistance in accordance with their “compassion and courage – based” ideology.

The Civil Defense Volunteers are from citizen sector who sacrifice themselves to provide the assistance to the official in disaster prevention and mitigation. Now they are under Disaster Prevention and Mitigation Act 2007 (B.E.2550) and sector 41 of this Act stipulates that the director shall organize the volunteer corps within the area under responsibility to perform the duties therein:

1. Provide the assistance to the official in disaster prevention and mitigation operation;
2. Perform any other duties as entrusted by the director and in conformity with the rule prescribed by prescribed by Ministry of Interior

The management and overseeing the volunteer, recruitment, training, right and duties, and discipline of the volunteer shall be in conformity with the regulation prescribed by Ministry of Interior (now based on Ministry’s Regulation of Interior on Civil Defense Volunteer 2010 (B.E. 2553)

The Civil Defense Volunteer Organization is under Ministry's Regulation of Interior on Civil Defense Volunteer 2010 (B.E. 2553) which is in line with Emergency and Incident Management Mechanisms and incident commander deem to director of Civil Defense Volunteer Center as follows;



Civil Defense Volunteer Local Administrative Center and Civil Defense Volunteer BMA District Center shall establish following divisions;

1. Disaster prevention and mitigation division
2. Security division
3. Victims relief division
4. Rescue operation division
5. Other divisions as necessary

However according to the regulation, there are Civil Defense Volunteers in only these organizations as follows;

- National Civil Defense Volunteer Center
- Civil Defense Volunteer Provincial Center
- Civil Defense Volunteer Local Administrative Center
- Civil Defense Volunteer BMA Center
- Civil Defense Volunteer BMA District Center

The others (Civil Defense Volunteer Regional Center and Civil Defense Volunteer District Center) which do not have volunteer, are responsibility of overseeing and supporting its subordinate organization.

In normal time, the Civil Defense Volunteers are support unit for disaster preparedness by monitoring the situation, exploring disaster risk area in community including being a good role model in enhancing safety awareness campaign. When disaster occurs, they are the main force of government in urgency response, search and rescue, evacuation, etc.

For morale support, now DDPM provide them annual Honor Award. There is Honor Award as follows:

1. Reward for Excellent Civil Defense Volunteer Center held by DDPM
2. Reward for Excellent Civil defense Volunteer held by DDPM

3. Reward for Excellent Mother of Civil defense Volunteer on Mother's Day held by The National Council on Social Welfare of Thailand (NCSWT)
4. Excellent National Volunteer Award held by Ministry of Social Development and Security Human
5. Proposal for Thai Royal Decoration to honor person who sacrifice themselves for
6. Princess Prem (Ngarmchit) Purachatra Award held by Princess Prem (Ngarmchit) Purachatra foundation

At present, Civil Defense Volunteer Center shall pay money as expense for their working according to Regulation of the National Disaster Prevention and Mitigation Committee on expenditure of Civil Defense Volunteer to prevent and mitigate the disaster B.E 2560 (2017).

As the National Civil Defense Volunteer Centre at central level, DDPM has continuously developed and enhanced the capabilities of these volunteers in performing specific disaster risk management functions, as well as building up a prototype of disaster risk management volunteer networks.

Example activities:

1. Observing areas where the disaster risks in community are.
2. Making hazard map and emergency evacuation routes in community.
3. Public relations the people in community.
4. Inspection and preparation of materials used in disaster prevention and mitigation.
5. Assistance affected people in community.
6. As a leader of community to provide drills in community.
7. Coordinating with local administrative organization.



2) OTOS (One Tambon One Search and Rescue Team)

DDPM has realized the urgent need to setup efficient and skillful search and rescue team at provincial, district and local levels and this initial emergency response team is community – based in nature. To an effective rescue system is essential to reduce severe injuries and loss of life at scene of the accident, DDPM has launched OTOS program which contains ; at the provincial level, the training of provincial SAR teams were completed and have been assigned to be SAR instructors ; at district level, district SAR team have been trained to become instructors as well ; at Tambon level (Thailand’s administrative unit in between district and village). Nowadays, OTOS program is completed with 76,772 SAR teams (10 members) based in each Tambon or local administration offices

OTOS members comprise civil defense volunteers who have been trained by DDPM and Mitigation to carry out the initial search and rescue operations at the incident site in a rapid, efficient and technically correct manner as well as in accordance with EMS system standards. In addition, DDPM has supported each and every local administrative organization to start, arrange training and equip its search and rescue team so as to enable the team to provide assistance to disaster victims in a timely and technically appropriate manner.

Example activities;

1. Preparation of equipment, vehicles, communication systems in emergency response.
2. Emergency response and assistance affected people.
3. First aid and moving affected people in an emergency
4. Coordinating with local administrative organization.



3) Rescue Volunteer in Charitable Organization

Charitable Organization is nonprofit organization which is person juristic according to the Thailand Civil and Commercial Code Act. They are all subject to corporate income tax but there are special rules to them. If Charitable Organization is certified by Revenue Department, it is applicable for income tax exemption and tax benefits if an individual or a corporation making donation to them.

These volunteer are rescue team but some of them have medical team which are well trained by the National Institute for Emergency Medicine (NIEM) established under the Emergency Medical Act B.E.2551 (2008) before performing their duties.

The Disaster Prevention and Mitigation Act, BE 2550 (2007), Section 42 stipulates that in cases where any charitable organization or person shall approach to assists the official in performing the duties whilst a disaster occurs, the Director or the officer whom entrusted by the Director shall be empowered to assign the task which or arrange a place where the aforesaid charitable organization or person be able to perform and provide the assistance as deemed appropriate for such charitable organization and person. To provide assistance as it deems appropriate.

At present, the government attaches importance to the operations of charitable organization especially person or volunteer who work for such charitable organizations. The Minister of Interior assigns DDPM is core agency for developing rescue volunteer and sets up guidelines for improving standards of rescue volunteer and overseeing them.

Example of Activities:

1. Providing assistance to the official in response disaster as assigned.
2. Monitoring and preparing to support rescue operations.
3. First aid and moving affected people in an emergency.
4. Coordinating with local administrative organization or government agencies.



4) Mr. Warning

In conjunction with various government agencies and NGO, DDPM has implemented a community-based volunteer training program which aims at creating a disaster warning network in the flashflood and mud slide prone villages. The trained villagers are designated as “Mr. Warning” and assigned to be the “vigilant”, “fore warner” and “coordinator” in emergency and non-emergency situation respectively. This program has been in concerted with its preceded program, “Simple Rain Gauge Installation” program. Nowadays, “Mr. Warning” training Program is completed with 29,281 trained people in the flood prone areas to be trained in this program.

Mr. Warning is warning network in risk area. DDPM has trained two people in a community (village) to be Mr. Warning who is responsible for monitoring, warning and evacuation coordination. The goal is to increase amount of Mr. Warning network in every disasters and every areas for people receiving a quick warning and preparing the emergency response.

They are responsible for monitoring, warning to people in community and coordinating with officer.

Example activities:

1. Monitoring and following the news related disaster situation in community from government agencies, materials and other communication channels.
2. Public relations in community to preparedness and how to response when disaster occurs in community.

3. Checking water level, rainfall in the area. If the rainfall is very abnormal or turbid, to notify the headman, community leaders and local immediately for considering the evacuation or appropriate action as soon as possible.



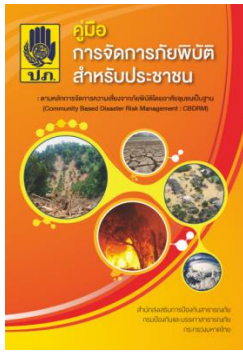
5) Communities Based Disaster Risk Management : CBDRM

DDPM has adopted and applied this appropriate people participatory approach to generate the awareness among the general public and mobilize their participation in every phase of disaster management so as to build safer and resilient community. In the past year, DDPM collaborates with various government agencies, local authorities, NGOs and international organization. This program will be jointly organized on the continuous to cover all vulnerable communities nation-wide. Nowadays, CBDRM program is completed with 12,095 vulnerable communities from 26,000 vulnerable communities.

DDPM promotes communities to be center in disaster management as planning, preparing for emergency response, prevention, management, mitigation and recovery in community as well as enhancing their capacity to deal with disaster preceding the arrival of the external assistance. DDPM focus on strengthening capacity of community and comprehensive disasters to sustain a safe community.

Example activities:

1. Studying disaster in community / village as type and time line of disaster, exploring risk area and safe area to evacuate, making hazard map for shelter location and evacuation route assignment.
2. Making community/village disaster management plan and setting up community/village committee, roll and duties of committee in all four phases of disaster risk management cycle.
3. Providing community/village drill for disaster mitigation.
4. Public relations in community.



6) Student Network

DDPM provides Disaster Volunteer Youth Camp Project for training youth to understand disaster and increasing their disaster awareness. DDPM educates them how to self – help and help friend, family and community when disaster occurs such as basic disaster management, first aid, how to use of fire extinguishers, how to prevent drowning and how to rescue an active drowning victim, etc.



Source: DDPM

7) Disaster Resilient Compact Community

DDPM sets up the center for Disaster Resilient Center in community for providing spaces and opportunities for individuals, communities, civil society and other stakeholders to participate in disaster risk management practices toward building community resilience to disaster such as community meeting, equipment warehouse, and gathering information of the community in accordance with the community disaster such as hazard map, evacuation routes, safety areas. The communities trained in CBDRM already can attend this project.



Source: DDPM

CHAPTER 5: LESSONS LEARNED FROM JAPAN, CONCLUSION AND RECOMMENDATIONS

In this last chapter of the study comprises of the lessons learned from Japan, conclusion and recommendations for developing safety culture networking in Thailand.

5.1 LESSONS LEARNED FROM JAPAN

1. Japan provides environment for cultivating safety culture.

1.1 There are many museums related to disaster for visitors.

Museum can help Japanese people gain correct knowledge of disaster. There are many information and materials which are attractive and easy to understand especially science knowledge such as sediment disaster, tsunami and volcano.

People learn about what happened when disaster occurs. The exhibits provide information on experience and lesson learned such as The Great Hanshin-Awaji Earthquake Memorial, Disaster Reduction and Human Renovation Institution has exhibits of collect and store materials relating disaster and disaster reflecting on how affected people lived.



Source : http://www.dri.ne.jp/en/centertop/center_organization

Moreover, Tsunami Storm Surge Station in Osaka provides activity that people can participate in experience and can enjoy learning, and realizes the importance of preparing for disasters such as simulation room for learning about how to react when disaster occurs (earthquake or tsunami).

In addition, many government agencies participate in providing disaster museum which show their authority in disaster operation such as Mountain Unzen – Fugen Eruption Disaster at Onokoba Sabo Miraikan, Hyogo Prefectural Police station , Japan Meteorological Agency (JMA) and Wakayama Sabo Research and Education Institute.



Source : ADRC

1.2 Japan provides disaster information to public such as hazard map, and guidebook. These are free copy and place in public place; people can take it back for educating and prepared themselves in advance. Some of them can download on internet. So, people can learn by self and share information to others such as family, friends, co-worker, etc. These lead to widespread safety culture in community.

2. Japan focuses on transmission of safety culture from generation to generation.

This part is important to continuing safety culture in Japan. Even disaster like tsunami and earthquake in the past claimed the live life many people, but few people know of the tragedy and someone forget it when time gone. They make an effort to let future generation know of the tragedy. In the past they erected stone monument's inscription continuing to be well – mark to ensure it can be clearly read such as O-Jishin Ryokawaguchi Tsunami-Ki Stone Monument and Yogo-Ji tone Monument. At the present, Japan establishes memorial museum such as the Great Hanshin-Awaji Earthquake Memorial, Disaster Reduction and Human Renovation Institution and preserves damaged building, area and property to remind and awake safety awareness the next generation such as damaged school building, city office and taxi at Onokoba Sabo Miraikan. They can transfer the tragedy to next generation well



Source : ADRC

Moreover, there are commemorative museum for people who have important role in disaster management. These awake next generation to remind that disaster was happen once and it maybe happen again so they have to prepare themselves through lesson learned from history into future. At Tsunami Educational Center which established in order to hand down “Hamaguchi Goryo” and learn from the past tsunami to prepare for any oncoming disaster. The first section is tsunami education center, visitor can learn how to protect myself from any future tsunami disaster by playing game and watching movie about the horror experience of tsunami. The second section is the history of tsunami and “Hamaguchi Goryo” including “the fire of rice shaves”. All are mirror an expression of disaster management thinking in Japan as the circle of disaster management and the role of private sector especially business continuity plan (BCP).



Source : ADRC

3. Japan focuses on cultivating safety culture in childhood.

According to the Disaster Countermeasures Basic Act, the national government and local governments shall make efforts in disaster education and training to prevent disaster occurrence and prevent expansion of disaster. Japan children educate disaster knowledge and drills from school. And many schools are evacuation place, so children can learn and recognize it by themselves.

Moreover, Japan promotes family has participate together in disaster risk reduction by sharing disaster information, drill preparing survival kit, etc. So, children can learn them and cultivate safety awareness.

Moreover, children can learn safety culture by themselves from Japan environment. Not many museums around them, Japan provides disaster activity for their experiences such as Kaeru Caravan at JICA building. Exhibitions are building disaster awareness for children. They can get many toys by playing games or attending activities. These attract children and their family to enjoy activity and get more experiences.



Source : ADRC

4. Japan focusing on changing lesson learned to practice.

Law on Disaster Management is one thing that shows Japan can change knowledge and idea to concrete practice without waiting. Disaster management in Japan is according to of the Disaster Countermeasures Basic Act which addresses all of the disaster phases of prevention, mitigation and preparedness, emergency response as well as recovery and reconstruction. This law clearly defines the roles and responsibilities of the national and local governments for disaster management. The one important thing making law on disaster management is modern and efficiency is that revisions and amendments of laws, plans and system are made after every disaster based on lessons learned for further improvement

Japan has other specific laws on disaster operations for efficient disaster management such as Disaster Relief Act, etc. And also Japan has provision of law on network or voluntary organization clearly and easily to understand. Disaster Countermeasures Basic Act (1961) assigns government and local government are responsible for enhancing and supporting network including establishes Disaster Volunteer Centers as temporary organization. Disaster Volunteer Centers provision is problem solving of volunteer system management in affected areas.

Moreover, there are laws and regulations related on network or voluntary organization. For example Non – Profitable Organization Law is a major difference between this and previous law from result of the Great Hanshin Earthquake. This situation lead to

awareness of the importance of volunteering grows quickly among both government officials and ordinary people and finally NPOs Law acquires nonprofit corporation status despite being engaged in non-profit activities. The aim is to solve problems for unincorporated organizations, such as a resulting lack of social credibility, inability to manage their assets as an organization, and in the case of those engaged in overseas efforts, inability to officially participate in international conferences.

Not only law on disaster but also disaster management by establishing the Japan Voluntary Organizations Active in Disaster (JVOAD). This organization is the result of the experiences after the Great East Japan Earthquake of 2011. There were many assistances and aids from individual volunteers, NPOs, government ministries, and Tohoku residents. These relief efforts lead to focus on the efficiency and strength of Japan’s response to emergencies and disaster events. Thus, the NGO/NPO sector, academia, and the Japanese government explored the idea of creating such a national body that would coordinate Japanese NGOs and NPOs and interface on their behalf with relevant government offices. Finally, JVOAD is an organization established and its aim is to support disaster victims and minimize vulnerability to future disasters through the development of a support network and by promoting cooperation across regions, areas and sectors.

5. Japan communicates to public with strong and attractive content.

Communication with strong and attractive content makes people understand their duty when disaster occurs and creates consciousness and behavior leading to safety culture in finally. Japan highlights “Self Help, Mutual Help and Public Help”. This concepts emphasis on individual preparedness for disaster by protecting self-first, then to assist family, neighbors and community by mutually supporting until the public help arrives to the affected area.

Moreover, there are many attractive signed boards, posters, brochures and documents with picture, cartoon and concise content in public places. Japan provides some information which people can bring it back and study by themselves such as hazard map and guidebook.



Source : ADRC

6. Japan focuses on systematic management for effective operation.

Network is a group of ordinary people who get together voluntarily to form an organization to carry on activities. They may lack of know-how to manage organization. Japan by local governments support them by providing guidebooks for Local Voluntary Organizations to lay down guidelines on initiate practice. These guidebooks include how to organize and manage organization, DRR knowledge dissemination, how to develop DRR map, how to organize training, how to prepare DRR equipment, disaster drill, how to conduct activities at disaster time, etc. These make them continually carry on activities because management troubles can be a huge issue to stop activities.

Moreover, the aim of establishing the Japan Voluntary Organizations Active in Disaster (JVOAD) and Disaster Volunteer Center is systematic management between public sector and citizen sector.



Source: From left, Fire and Disaster Management Agency (FDMA), Ishikawa Prefecture and Setouchi City

5.2 CONCLUSION AND RECOMMENDATIONS

Network which is civil sector is significant in disaster management and disaster reduction. The members of network are resident who know well about their area and community. They are not only people who interesting in disaster management but many people are leaders of community also. Thus, they can inform understanding of safety culture and cultural transmission to people in their community.

Both government and local administrative organization are responsible for disaster management as well as promote networking according the Disaster Prevention and Mitigation Act 2007 (B.E 2550) and the National Disaster Risk Management Plan 2015 (B.E 2558). Especially the local administrative organization which is close to the network within the respective local jurisdiction plays an important role.

SAFETY THAILAND is driven since 2015 which compels cooperation in concrete management in all sectors and all agencies of Thailand to build safety culture in order to achieve the important goals for providing safety to Thai people.

Cultivating safety culture is significant principle in disaster risk management. National Disaster Risk Management Plan sets disaster risk management target on encouraging the general public engagement in fostering and maintaining a robust safety culture and disaster - resilient society. This target is to increase public safety awareness through highlighting the creation of body of knowledge, awareness, and safety culture as well as developing local and community capacity gearing towards building community resilience to disaster. It can be said that safety culture is one principle which lead Thailand to resilience.

At present, DDPM drives on DDPM Strategy Plan 2017 - 2021 and the 3rd strategy is to strengthen public sector, private sector, communities, volunteers, and networks in knowledge, awareness, safety culture and participation in disaster risk management. However, strong individual capacity lead to strong network capacity so DDPM focus on enhancement of individual ant network capacity at the same time. Networks are residents in community who know and have experiences about their area, environment and community. They are not only people who interesting in disaster management but many people are leader of community also. Thus, they can inform understanding of safety culture and cultural transmission to people in their community. DDPM encourages individual capacity for self – help, help people and community in policy and projects, and building safety culture including training them to be volunteers. The challenges of capacity individual are how to train them specific disaster program for each community suitably and how to make them ready to work promptly.

For network capacity, there are many types of networks in Thailand but some of them lack of organization management in long term. Moreover, there are no support system when they working together. These are challenges. The one approach to network capacity development is CBDRM. The importance of CBDRM has been recognized since long in promoting a safety culture through disaster risk reduction. These approaches have been practiced by various community groups. DDPM focus on applying CBDRM with communities in policy planning and projects. Communities in Thailand accomplish and people have safety awareness. It can be said that CBDRM is not use for only community but also organization or group of people including networks. The challenges of Thailand are how CBDRM approach practiced in all sectors of Thailand and how networks practice through CBDRM approach. Now DDPM has thinking to use CBDRM approach in Civil Defense Volunteer for organization management. This thinking is initiate and concrete effort through making Civil defense Volunteer Strategy Plan 2018 – 2021. The strength of Civil Defense Volunteer is strong structure organization. They are only one network in Disaster Prevention and Mitigation Act

2007 (B.E 2550), and they have regulations for structure and organization management. Moreover, the structure of Civil Defense Center, according to the administrative structure of Thailand, can promote widespread CBDRM approach in all level of Thailand administration. These can lead to CBDRM and safety culture development in Thailand. However, other networks practicing CBDRM is next challenge of Thailand.

Strength of Safety Culture Networking in Thailand:

1. "SAFETY THAILAND" Policy is a significant agenda of government. Government agencies and other sectors must strive to drive this policy. It is not sole responsibility of the government and local administrative organization only.

2. Most members of network are social leaders and play important role in the community. They can transfer Safety Culture to the people in community better than official because they are a resident in community and people trust in their leaders and open mind to learn new things.

3. There are networks in various functions of disaster operation in Thailand such as early warning, rescue team, etc.

4. Networking is flexible for Disaster management. Some networks are overseen by DDPM, they can manage themselves independently. But civil defense volunteer as assistance official are controlled by civil Defense Volunteer Center in each level, the director can order them directly.

5. DDPM has policy to promote network by specific training. So, training programs are update and modern.

6. Civil defense volunteer Organization

- There are civil defense volunteer Organization in every local administrative organization, every province and DDPM covering all area of Thailand.

- They are under Ministry's Regulation of Interior on Civil Defense Volunteer B.E. 2553 (2010) which is their specific regulation. Organization management is clear pattern in overseeing the volunteer, recruitment, training, right and duties, and discipline.

- There are awards for morale that encourage them to work continuously.

- They can receive money as expense according to Regulation of the National Disaster Prevention and Mitigation Committee on expenditure of Civil Defense Volunteer to prevent and mitigate the disaster B.E 2560 (2017)

7. There are Rescue Volunteers in Charitable Organizations covering all area of Thailand. Some of them have medical team and they are well trained by the National Institute for Emergency Medicine (NIEM) established under the Emergency Medical Act 2008 (B.E.2551) before performing their duties.

8. DDPM has E-Volunteer Project Development which is database networks in Thailand. Relevant organizations as DDPM, provincial administration and local administrative organization can browse their networks and know amount of human resources in area for disaster management.

Weakness of Networking in Thailand:

1. Thailand cannot provide environment for creating safety culture enough. For example, there is only one museum related the phenomena of natural disaster that happened in Phuket. So rising awareness or safety culture is difficult as well as cultural transition to the next generation.

2. Thai people hardly get public disaster information such as hazard map. Even if they have rights to information access, some information is requested before.

3. Disaster information and materials for public are not attractive and easy to understand.

4. Providing budget is limit because cultivating safety culture projects are difficult to measure the results such as whether people in community have knowledge from training project or not.

5. The local administrative organization has many public service responsibilities including disaster management and disaster risk reduction so it depends on the policy of each local administrative organization whether these are important or not.

6. Thailand lacks of know – how regarding cooperation between volunteers and affected community and cannot manage assistance teams well, due to the lack of management skills especially local administrative organization. Management in disaster time is poor and ineffective management.

In practice, such responsibility is discretion of the commander/director in each disaster level according the Disaster Prevention and Mitigation Act 2007 (B.E 2550). There is no clear pattern management while the commander/director has various missions in charge of disaster operations.

Recommendations

1. Thailand should provide environment for raising safety awareness, cultivating safety culture and cultural transmission because safety mind cannot be created in a short period of time but it will be molded with a personality for a long time to create consciousness and behavior since a child born. Safety culture environment creates incentive and inspiration to people in safety living as well as create consciousness and behavior in safety living without force.

For example:

- To provide public museum or exhibition related the phenomena of disaster. The aims are source of knowledge and information to educate people and making them ready to face disaster. These public museum or exhibition may be held by government agencies as DDPM, Meteorological Department of Thailand, Ministry of Transport, and etc. as well as local administrative organization.

2. Thailand should provide disaster information and materials which are easy to understand in short and concise content and attractive (may be used as a cartoon or picture). The purpose is to make information easier to understand for communicate with people.

3. Thailand should provide disaster information in public place and without requested. The aim is that people get information easily. For example;

- To provide hazard map and disaster handbook and they can bring it back.
- To provide website which is easy to access and understand in short and concise content and attractive.

4. Thailand should provide space and opportunities for variety networks such as resident in a condominium, student in a school or school zone (not only community/village type) especially children group which are important group for cultivating safety culture.

5. Thailand should provide system or concept for supporting network management such as guidebooks in each network. These are not for control them but oversee.

However providing standards for control network involved loss of life and injuries operation such as a medical emergency are necessary.

6. Thailand should establish organization to manage and coordinate network system and sharing information in affected area to relevant organization for supporting when disaster occur same as Disaster Volunteer Centers and Japan Voluntary Organizations Active in Disasters (JVOAD).

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PRESENTATION MATERIALS

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- JVOAD (Japan Voluntary Organizations Active in Disaster)
- DDPM (Department of Disaster Prevention and Mitigation, Thailand)