

# Community Planning and the Policy Process for Regional Revitalization against Disasters: Thailand's Readiness and the Japanese Experience

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## 1. Introduction

In 2002, the Department of Disaster Prevention and Mitigation (DDPM) within the Ministry of Interior in Thailand was established. The department has an important role in planning and creating a policy process for disaster management in Thailand, such as the National Disaster Prevention and Mitigation (NDPM) Plan. The DDPM also has a major role in policy implementation, including national policy, provincial policy and the Bangkok Metropolitan plan. Although Thailand already had the NDPM Plan (2010-2014) in place to deal with disasters, the Great Flood in 2011 was the worst flooding in at least five decades in Thailand. It revealed the ineffectiveness of the government in disaster management and emergency response. The failure of flood prevention in association with uncountable damage became a seriously contested issue in which authorities blamed each other (Thongchai, 2012). The National Economic and Social Development Board (NESDB) identified the limitations of the National Disaster Prevention and Mitigation Committee (NDPMC) in policy implementation (NESDB, 2011). Thus, we need to reconsider the implementation of the NDPM Plan in accordance with various related Acts and the NDPM's own organization and management system (Naruekamon, 2012).

This research will review policies and plans for disaster management in Thailand in order to analyze the readiness of Thailand to respond to natural disasters. The research question is "*whether Thailand's community planning and policy process for regional revitalization is in readiness against a disaster or not?*" This paper examines three levels of policy planning: national policies, provincial policies and community plans. This research will also review Japanese planning and policy processes for disaster management. The sources for this paper are secondary data such as governmental policies, national plans, provincial plans, local government plans, community plans, NGO plans, reports, websites and publications of related organizations. The empirical data will be analyzed using a chronological explanation. The readiness of Thailand for regional revitalization for disaster management will be interpreted through each process of planning and policy with reference to the Japanese model.

The paper is divided into four parts: a chronological explanation of policies and plans for disaster management in Thailand (including national, provincial and community levels); the Japanese experience of planning and policies for disaster management; a discussion on the readiness of the Thai community's planning and policy process; and, the conclusion.

## 2. Planning and Policies for Disaster Management in Thailand

From all the evidence gathered, this paper summarizes plans and policies regarding disaster management in

Thailand, including national, provincial and community plans. A chronological explanation is a useful method to narrate the background of Thailand's planning and policy process.

## 2.1 National level

Any policy in Thailand needs to be in accordance with the National Economic and Social Development Plans (NESDPs). Natural disaster became a much discussed topic in Thailand after the tsunami in the southern part of Thailand in 2004. The NESDB needed to promptly respond to this event and its efforts in planning and policy for disaster management can be seen in the many recommendations which were included in different NESDPs, as shown below;

- The Ninth NESDP (2002-2006) placed a high priority on enabling a participatory process between government, the private sector, and the community; and, introduced community-based disaster risk management (CBDRM).
- The Tenth NESDP (2007-2011) created the National Tsunami Prevention and Mitigation Strategy, with a focus on knowledge transfer, enhancing community awareness, early warning, safety area preparation, evacuation, and CBDRM.
- The Eleventh NESDP (2012-2016) established a mission to build a secure natural resource and environmental base by supporting community participation and improving resilience in order to cushion the impacts from climate change and disasters.

In 2005, one year after the big tsunami hit the southern part of Thailand, a National Preparedness Policy was announced. The policy encompasses all emergency plans created by different agencies or organizations for each type of disaster. At the same time, the National Civil Defense Plan of 2005 remained in effect.

The main policy-making body for disaster management is the DDPM which was created through the Bureaucratic Reform Act of 2002 under the Ministry of Interior, serving as the Secretariat of the NDPMC. The DDPM is the government's focal point for all activities related to disaster prevention and mitigation. Through a hierarchical bureaucratic system, the DDPM has regional branches in 76 provinces all over Thailand. The DDPM is responsible for formulating the NDPM Plan and monitoring and evaluating its implementation. It also coordinates and provides support for disaster prevention and mitigation, including response and recovery; capacity building for government agencies and authorities and the private sector; and, researching and developing plans for effective disaster prevention and mitigation.

As mentioned above, the NDPMC, chaired by the Prime Minister or designated Deputy Prime Minister, is the main policy-making body, and is tasked to integrate disaster prevention and mitigation into government agencies, local administrations, and relevant private sectors. It consists of the Ministry of Interior, the Ministry of Defense, the Ministry of Social Development and Human Security, the Ministry of Agriculture and Cooperatives, the Ministry of Transportation and Communications, the Ministry of National Resources and Environment, the Ministry of Information and Communication Technology, and the Ministry of Public Health. It also includes the Bureau of Budget, the Royal Thai Police, the Royal Thai Army, the Royal Thai Navy, the Royal Thai Air Force, the National Security Council, and five experts in city planning and disaster prevention and mitigation.

The NDPMC was established according to the Disaster Prevention and Mitigation (DPM) Act, 2007. The responsibility for dealing with disasters and accidents that used to be with the Civil Defense Division of the Department of Local Administration and the National Safety Council under the Office of the Permanent Secretary for the Prime Minister's Office is now under the administration of the DDPM. The DPM Act came into effect on 6

November, 2007, replacing the Civil Defense Act, 1979 and the Fire Defense Act, 1999. The DPM Act defines what constitutes a disaster, and details the institutional arrangements for disaster prevention and mitigation and identifies agencies' responsibilities for the same.

In 2009, the cabinet approved the Strategic National Action Plan (SNAP) for Disaster Risk Reduction (2010-2019). The planning process of SNAP is one of cooperation between the DDPM of Thailand and the Asian Disaster Preparedness Center (ADPC) under the Hyogo Framework for Action (HFA) 2005-2015. SNAP received financial support from the United Nations International Strategy for Disaster Reduction (UNISDR). SNAP details disaster risk reduction (DRR) activities for 14 types of hazard, which include tropical storms, floods, droughts, cold waves, and smog from wildfires. SNAP is comprised of two planning components, namely:

- Normal Action Plan: The Normal Action Plan is implemented under the responsibility and authority of different agencies in each fiscal year or designated period. Only disaster risk reduction elements of the Normal Action Plan are part of SNAP.
- Compulsory Action Plan: The Compulsory Action Plan, which specifically addresses the requirements of the HFA, has to comply with and be implemented by all agencies and communities from 2010 to 2019.

In November 2009, the NDMP Plan (2010-2014), which was formulated by the NDPMC based on the National Civil Defense Plan of 2005, was approved by the cabinet. The plan aimed to provide a framework and guidelines for all related authorities; both national and local bodies in Thailand. The NDPM plan was comprised of three main parts: the principle of disaster prevention and mitigation; the process of disaster prevention and mitigation; and, the process of prevention and mitigation for security.

In 2011, the DDPM established the DDPM Strategy Plan (2012-2016) by virtue of the DPM Act, 2007. According to Article 11, one of the DDPM's tasks was to propose a DPM Plan to the NDPMC which would later be approved by the cabinet. The plan provides the framework and guidelines for all related authorities in formulating additional programs and projects for disaster prevention and mitigation, besides their ordinary tasks.

In addition, there are many more national plans and master plans for disaster prevention and mitigation established by DDPM, such as the Master Plan for Tsunami Prevention and Mitigation, the Master Plan for Earthquake Prevention and Mitigation, the Master Plan for National Fire Safety Development, and the Master Plan for an IT Contingency Plan. Different kinds of plan were established in the same way by different organizations such as the Bangkok Metropolitan Administration and other local authorities; for example: the Master Plan for Water Resource Management; the Action Plan for Integrated and Sustainable Flood Mitigation in the Chao Phraya River Basin; and, the Action Plan of Water Management for the Urgency Period (2012-2013).

## 2.2 Provincial Level

The DPM Act of 2007 also details institutional arrangements for disaster prevention and mitigation at district and local levels. Each local administration is given power to respond to emergency situations, support disaster prevention, mitigation, and recovery and assist other local administrations in their prevention and mitigation operations. All provincial agencies should fully understand the national disaster management framework so as to be knowledgeable of their own respective status and roles. This includes the National Preparedness Policy, which comprises the NDPM Plan by the Ministry of the Interior and the National Protection Plan by the Ministry of Defense, which provides a framework for all agencies to establish their own action plans.

The National Preparedness Policy encompasses all emergency plans created by different agencies or organizations for each type of disaster. It also identifies the relevant Ministries or Departments which should be mainly responsible

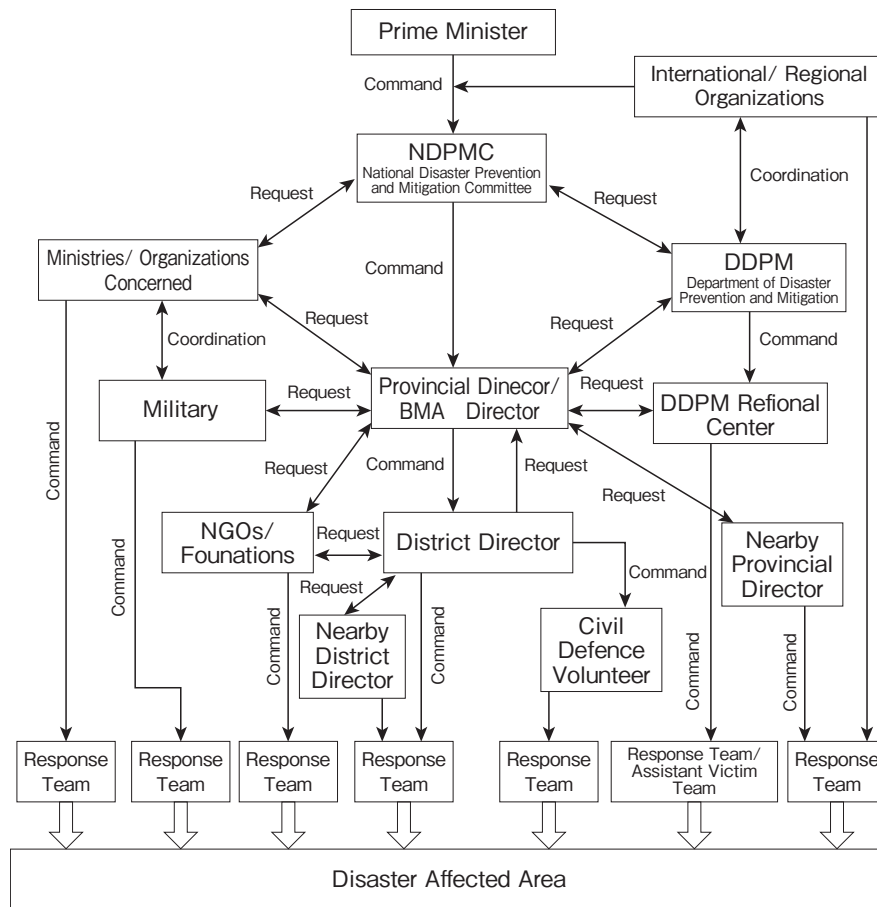


Figure 1: Institutional arrangement for disaster prevention and mitigation, Thailand.

Source: DDPM, Ministry of Interior.

for establishing emergency plans that cover all severity levels and should play a systematic role in coordinating and supporting the NDPM Plan, the Bangkok Disaster Prevention and Mitigation Plan, the District Disaster Prevention and Mitigation Plan, the Municipal Disaster Prevention and Mitigation Plan and the Muang Pattaya Disaster Prevention and Mitigation Plan, under the 2007 Act of Disaster Prevention and Mitigation.

The DDPM is decentralized down to the provincial level through Regional Disaster Prevention and Mitigation Centers and Provincial Disaster Prevention and Mitigation Offices. The DDPM has established Disaster Prevention and Mitigation Academies to train managers, practitioners, local government officers, and other actors in disaster risk management. The institutional arrangement for disaster prevention and mitigation in Thailand is shown in Figure 1.

Provincial Governors are responsible for disaster prevention and mitigation in their provinces, with power to formulate their own Provincial Disaster Prevention and Mitigation (DPM) Plan in line with the national plan. They can build capacity for, coordinate, and support the implementation of the plan at the local administration level, and demand other government agencies and local administrations in their respective provinces to cooperate in the implementation of the plan.

A committee, consisting of the Deputy Provincial Governor, the Commander of the Provincial Army, the Provincial Administrator, the DDPM Chief Officer, and representatives from provincial government services, local administrations, and public charities, chaired by the Provincial Governor, is tasked to prepare the Provincial DPM Plan. A Special Command Center in each province commands, controls, and oversees disaster responses, recovery,

prevention, and mitigation.

The Bangkok Metropolitan Governor is responsible for disaster prevention and mitigation in Bangkok, with the same power as that of Provincial Governors. The Governor constitutes and chairs the committee for DPM Plan preparation for Bangkok, consisting of the Permanent Secretary for Bangkok, the DDPM, the Ministry of Defense, and representatives of relevant governmental agencies, public charities, communities, and universities in Bangkok.

In fiscal year 2012, every province created their disaster prevention and mitigation plan following the guidelines of the DDPM Strategy Plan (2012-2016). However, additional local emergency plans which are not in line with the national plan can also be found. The Nakon Pakkret Model (2011) is an emergency plan for flood prevention in the Pakkret City Municipality, Nonthaburi Province. The plan was locally established by the planning section of Pakkret City Municipality. It reveals an effort by the local authority to promptly prepare for and respond to disasters.

### 2.3 Community level

Besides the planning and policy process at a national level that reflects the Thai bureaucratic system, planning at the community level can also be found in the movements of civil society, Non-Profit Organizations (NPOs), Non-Government Organizations (NGOS) and other bodies. These actors have gained recognition for their roles in response to many natural disasters such as the tsunami in the southern part of Thailand in 2004 and the Great Flood in 2011. Different kinds of plans have been established to protect the community from disasters and to prepare for emergency responses in local areas. Shown below are examples of the planning process at the community level in Thailand:

- Community Planning for Disaster Response (2010) of Hat Yai Nai community, Songkhla Province that was established by the Songkhla Community Foundation; cooperating with the Asian Cities Climate Change Resilience Network (ACCCRN).
- Community Planning for Disaster Risk management of Ban Hat Sai Dum community, Krabi Province.
- Policy proposal (2011) of a community movement in Songkhla Province for solving local community disaster problems. The proposal focuses on a community database and a community-self management center.
- Action Plan of the Network of Natural Disaster Management in the southern region, a civil society which was upgraded from the Network of Master Plans for the southern region community's self-reliance. The network cooperates with the Thai Health Promotion Foundation.
- Master Plan of the Network of Disaster Management of Kao Kor community, Nakhonsithammarat Province.

However, community planning for disaster management in Thailand is limited to specific areas, and is not as widespread as the national and provincial plans. There are few community activities regarding disaster preparedness and protection. In the same way, emergency response and disaster mitigation in Thailand is still at a starting point. Therefore, it is assumed that Thai people should be encouraged to become more aware of disaster management.

A chronological analysis of planning and policies for disaster management in Thailand reveals that:

- The first national specific plan for disaster management (National Civil Defense Plan of 2005) was launched one year after the first tsunami occurred in the southern part of Thailand in 2004. Before that, Thailand had never experienced any tsunami or big earthquake. It brought about awareness to people in the affected areas and urged them to create plans and policy processes to prepare for such disasters that might happen in the future.
- Thailand has annual floods in many parts of the country (e.g. the Chao Phraya River Basin) but there was no specific national plan for flood prevention until the Great Flood in 2011 occurred.

**Table 1: Chronology of Planning and Policy for Disaster Management in Thailand**

Year	Plan and Policy			Disaster in Thailand
2002	9 <sup>th</sup> NESDP			Flood
2003				
2004				Earthquake and Tsunami
2005		National Civil Defense Plan National Preparedness Policy		Drought
2006				Flood
2007	10 <sup>th</sup> NESDP	Disaster Prevention and Mitigation Act		
2008				
2009				
2010				Flood
2011	11 <sup>th</sup> NESDP	National Disaster Prevention and Mitigation Plan	The Strategic National Action Plan (SNAP) for Disaster Risk Reduction	The Great Flood
2012				
2013				Flood
2014		DDPM Strategy Plan		
2015				
2016				
2017				
2018				
2019				

Source: Compiled by authors.

- It can be assumed that the tsunami in 2004 and the Great Flood in 2011 have resulted in a community planning and policy process for disaster management in Thailand.

- The Thai legislative process has been slow in responding to natural disasters. The DPM Act was enacted in 2007 (three years after the tsunami hit the southern part of Thailand). Thailand already had the Civil Defense Act, 1979 and Fire Defense Act, 1999, but they were not effective enough to respond to the current situation.

- After the Great Flood in 2011, different kinds of plans and policies were established in different levels and areas. However, there is still a similar question that needs to be answered: are existing plans and policies, including the planning and policy making processes, ready for regional revitalization and can they be used to effectively respond to disasters in the future or not?

### 3. Japanese experience

In the 1940s and 1950s Japan repeatedly experienced typhoons and earthquakes, and in particular the 1959 Isewan Typhoon caused tremendous damage. In 1961 the Disaster Countermeasures Basic Act was passed which established the following measures:

- The Central Disaster Management Council was established to formulate the overall policy for Disaster Risk Management (DRM) and to function as the national coordinating body for disaster management. The Council was

chaired by the Prime Minister, and its members came from line ministries, semipublic organizations (such as the Japan Broadcasting Corporation or NHK as it is known, the Bank of Japan, the Japanese Red Cross, and a telecommunications company) and representatives from academia.

- Roles and responsibilities regarding disaster reduction were clearly defined at the national, prefectural, and municipal government levels, and also to organizations and citizens in the community. The three levels of government were required to draw up master plans for DRM. Also, all ministries and semipublic organizations were asked to draft disaster management plans for their own sectors.

- The cabinet submitted an annual report to the National Diet covering the current status of DRM, and specified budgetary allocations for DRM programs. The National Diet formed special committees for disaster management in both lower and upper houses, which have continued to monitor governmental DRM initiatives.

In 1995, the occurrence of the Hanshin Awaji Earthquake forced a revision of the 1961 Act to focus more on countermeasures and prevention, resulting in a new Disaster Countermeasures Basic Act in 1995. Disaster Management in Japan is categorized into three levels, including national, prefectural (regional) and municipal levels. The significance of each level is detailed as follows:

- National Level. The prime minister is the 'National Commander' of the National Disaster Management Council and designated government organizations (23 ministries and agencies) and public corporations (63 organizations including independent administrative agencies, the Bank of Japan, the Japanese Red Cross Society, NHK, electricity and gas companies). In this connection, the National Disaster Management Council is responsible for formulating and promoting the implementation of the Basic Disaster Management Plan, and the other two designated agencies of government and public corporations are responsible for the formulation and implementation of the Disaster Management Operation Plan.

- Prefectural Level (regional level). Governors are commanders ordering actions via the Prefectural Disaster Management Councils and the designated government organization and public corporations in local areas. Prefectural Disaster Management Councils conjunctionally work with the aforementioned designated agencies to formulate and promote the implementation of Local Disaster Management Plans.

- Municipal Level. At this level, the mayors of cities, towns and villages are the commanders (acting similarly to governors at the prefectural level), and function through Municipal Disaster Management Councils to formulate and promote the implementation of Local Disaster Management Plans.

At the national level, the National Disaster Management Council retains its leading role in conducting the following activities:

- Formulating and coordinating the implementation of the Basic Disaster Management Plan.
- Formulating and coordinating the implementation of contingency plans for emergencies.
- Advising the prime minister or the minister of state for disaster management on important issues relevant to disaster management.
- Fostering consultation on important issues surrounding disaster management in response to inquiries from the prime minister or the minister of state for disaster management.

The Cabinet Office is the secretariat for this council. The minister of state for disaster management, who is assisted by the staff of the Cabinet Office, has a mandate to oversee the planning and central coordination of basic DRM policy and large-scale disaster countermeasures. The minister is also responsible for gathering and integrating

information and for other disaster emergency measures.

After the Great East Japan Earthquake on 11 March, 2011, the Council recommended specific evaluations to identify whether any revisions or additions to the 1995 Basic Act were required. The Expert Committee on Earthquake and Tsunami Disaster Management prepared a report to document facts and findings from the Great East Japan Earthquake experience.

On April 2011, an advisory panel of intellectual figures called the Reconstruction Design Council in Response to the Great East Japan Earthquake was set up by the government of Japan. The Reconstruction Design Council engaged in broad and vigorous discussions to formulate a 'blueprint' for reconstruction that would be a source of hope for people in both the disaster areas and other areas of the nation in the future. The Council submitted a report of recommendations on reconstruction planning to Prime Minister Naoto Kan on June 25, 2011. The government stressed that the recommendations included in the report would be respected to the maximum in its effort to develop 'basic reconstruction guidelines' that would be announced at a later date.

On 24 June, 2011, the 'Basic Act on Reconstruction in Response to the Great East Japan Earthquake' was passed in the Diet of Japan and at the same time a 'Reconstruction Headquarters in Response to the Great East Japan Earthquake' was created.

In July 2011, 'Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake' were decided by the Reconstruction Headquarters in Response to the Great East Japan Earthquake. The Guidelines constitute a 'blueprint' for the government and other actors to tackle numerous challenges in the reconstruction process. Basic concepts underlying the guidelines are:

- The main administrative actors are municipalities.
- The central government will present guidelines for reconstruction and provide support for finance, human resources, know-how and other aspects.
- There is a need to reinforce bonds (*kizuna*) with the international community; that is, 'reconstruction is open to the world'.

On December 27, 2011, the Japanese government amended the 'Basic Disaster Management Plan' aiming to enhance countermeasures against multi-hazard, high-impact events. The Basic Disaster Management Plan is the 'Master Plan' and the basis for DRM activities in Japan. It was prepared by the National Disaster Management Council in accordance with the Disaster Countermeasures Basic Act. The plan clarifies the duties of the central government, public corporations, and local governments in implementing measures. The plan also describes the sequence of disaster countermeasures such as preparation, emergency response, recovery, and reconstruction for various types of disasters. Based on the Basic Disaster Management Plan, every designated government organization and public corporation draws up a Disaster Management Operation Plan; and every prefectural and municipal disaster management council prepares a Local Disaster Management Plan.

Accelerating reconstruction is the priority of the Japanese government. 'The Reconstruction Agency' is the principal government agency tasked with leading and managing the reconstruction process following the March 11, 2011 Great East Japan Earthquake, which precipitated the triple disaster of earthquake, tsunami and nuclear accident. The Agency's main role is to accelerate structural reconstruction and revitalization in the affected areas, by supporting the implementation of government policies and managing the coordination of reconstruction strategies and initiatives between various branches of government at a national level and local municipalities.

Established on February 10, 2012 with a ten year mandate, the Reconstruction Agency was created under terms set out in the 'Basic Act on Reconstruction' as the successor to the Reconstruction Headquarters in Response to the



Great East Japan Earthquake, which coordinated initial response efforts in the immediate aftermath of the disaster. Its main principles and priorities are based on the 'Basic Guidelines for Reconstruction', which were published by the Reconstruction Headquarters on July 29, 2011 and provide a blueprint for the overall reconstruction process.

The Reconstruction Agency maintains its essential role as a 'Control Tower' coordinating all reconstruction efforts, with work continuing in a number of important areas. These include continued efforts towards the removal of debris, rebuilding infrastructure and housing, issues surrounding the Fukushima crisis, advancing decontamination, improving food safety, boosting local industry and economy and promoting investment and tourism. The agency is under the cabinet, with a view to promoting and coordinating all policies and measures for reconstruction in an integrated manner. This includes planning and coordination of national policies and measures for reconstruction, supporting the efforts of afflicted local governments for reconstruction, and serving as a 'one-stop' center for local authorities.

In order to support reconstruction the future direction of the Reconstruction Agency is to establish a system of 'Special Zones for Reconstruction' and create new projects such as 'Smart Community' and 'Future City' initiatives, which are aimed at revitalizing the region's economy and supporting the redevelopment of communities affected by the disaster.

### **3.1 System of Special Zone for Reconstruction**

To accelerate reconstruction and stimulate investment in the affected regions, the government has established a system of Special Zones for Reconstruction, which offer deregulation and simplified statutory procedures, a variety of tax breaks and financial incentives, and new mechanisms to facilitate land-use restructuring. The system, taking into account requests from the disaster-afflicted communities, provides special arrangements for deregulation and reduced procedures. Assistance in terms of tax, fiscal and financial arrangements will also be considered. They aim at promoting such measures as land use restructuring through a unified contact point for multiple authorization processes and seeking a swifter completion of such processes. Furthermore, a legal framework will be introduced with the intention of prompting the introduction of necessary special measures and assistance in which consultation between the national government and disaster-afflicted local governments can take place, reflecting the progress made in developing plans for reconstruction at the regional level (Basic Guidelines for Reconstruction, Reconstruction Headquarters, 2011).

In total, 52 plans for Special Zones for Reconstruction have been approved, which include those intended for the promotion of town-building through land-use restructuring, renewable energy initiatives to support regional development, and the development of a medical industrial cluster.

### **3.2 Smart Community**

Building upon the lessons learned from the March 2011 earthquake, Japan is using the reconstruction process as an opportunity to introduce innovative and state-of-the-art technology in the Tohoku region, leveraging renewable energy supported by financial backing of approximately 8.1 billion yen. A number of Smart Community and Future City initiatives are underway in Tohoku's three prefectures, aimed at revitalizing the region's economy and supporting the redevelopment of communities affected by the disaster.

Advanced renewable energy and energy storage technology are employed in the Smart Community and Future City projects, including 'smart' grid systems. Their success can also serve as an example to help other cities in Japan

and around the world adopt cleaner and more efficient infrastructure to address global challenges and ensure a more sustainable future.

Smart Communities are networks of houses and buildings that efficiently produce and consume energy, encouraging reduced dependence on nuclear energy and conventional fuels and lowering CO2 emissions. The government regards the development and promotion of Smart Communities as a growth sector, and is currently subsidizing construction projects with the private sector in municipalities throughout Tohoku including Miyako and Kitakami in Iwate Prefecture; Yamamoto, Ohira, Ishinomaki and Kesenuma in Miyagi Prefecture; and, Aizuwakamatsu in Fukushima Prefecture.

Although the main Smart Community projects are still in the planning stages, steady progress has been made towards the development of smart houses and office buildings. Along the Tohoku coastline, many initiatives are planned for the future. For example, Kesenuma City's Akaiwa Port, the current center of the marine product processing industry in the region, will be transformed into an eco-park with self-contained energy systems. Additionally, a project called the Medeshimadai Mega Solar Project in Natori City will repurpose unused land into massive solar power plants, harvesting renewable energy and storing it in case of future emergencies. A number of other public private partnership projects are underway to promote renewable energy, with Tohoku becoming a testing ground for the development of new solutions.

### 3.3 Future City Initiative

By designating a number of cities in the Tohoku region as Future Cities, Japan hopes to build cutting-edge communities that utilize advanced technology and new socioeconomic systems and innovative business models in order to address modern challenges such as the environment and aging. The ultimate goal of each Future City is to sustainably resolve environmental and urban issues in order to allow residents to live prosperous, healthy and secure lives in a vibrant society.

The town of Minamisoma, which suffered extensive damage following the March 11 disaster, is part of this new initiative to build the 'city of the future'. In Minamisoma, renewable energy—wind, solar and biomass—will replace conventional power generation. In June 2012, the city announced that it would become the site for Japan's largest solar-generation facility, producing enough power for 30,000 homes by 2014. The city will also be more 'compact', with centralized streets and residential areas. Homes will be energy-efficient, equipped with solar panels and storage batteries.

An analysis of the above evidence of Japan's experience of planning and policy for disaster management shows that:

- Plans, policies and legislative processes in Japan that were launched after disasters occurred during the period from the 1940s to the 1960s (e.g. the Disaster Countermeasures Basic Act, 1961). This is similar to when Thailand responded to the first tsunami in 2004 except that it was three years after the tsunami hit before the Disaster Prevention and Mitigation Act of 2007 was enacted. The difference is that a reconsideration of plans, policies and legislative processes in Japan were more intense and focused more on the experience and awareness of its people.
- The Japanese experience after the Great East Japan Earthquake on March 11, 2011 has brought a significant change in some specific plans, policies, actions, organizations and systems. This is to respond to disasters and to revitalize specific affected regional areas.

Although planning and policy processes in Thailand and Japan are different, some of the Japanese experience should be considered useful and might be able to be applied to the Thai planning and policy process for disaster

**Table2: Specific responses after the Great East Japan Earthquake in 2011**

Act	The Basic Act on Reconstruction in response to the Great East Japan Earthquake
Council	The Reconstruction Design Council in response to the Great East Japan Earthquake
Organization	The Reconstruction Headquarters in response to the Great East Japan Earthquake
	The Reconstruction Agency
Plan and Policy	The Basic Guidelines for Reconstruction in response to the Great East Japan Earthquake
System and Project	The system of 'Special Zones for Reconstruction'
	New projects such as the 'Smart Community and Future City' initiatives

Source: Compiled by authors.

management and regional revitalization in the future.

#### 4. Discussion: Readiness of the Thai Community Planning and Policy Process

The future readiness of the community planning and policy process for regional revitalization against disasters in Thailand can be discussed by analyzing today's policy and plans in Thailand and Japan's experience, especially after the Great East Japan Earthquake.

First of all, referring to the chronological explanation and some examples of the aforementioned plans and policies in Thailand, many plans and policies for disaster management have been proposed. We can see that Thailand and Japan have different kinds of national plans, provincial plans and community plans. In addition, each level of plans and policies has different purposes or requirements as explained in Table 3.

Principally, planning and policy processes in Thailand and Japan are in line with the above policy levels. However, in practice there are some differences in both countries regarding the experience and nature of each country. The system of Special Zones for Reconstruction and the creation of the new Smart Community and Future City initiatives in Japan are part of a national policy and plan designated by the national organization called the Reconstruction Agency. These systems are more specific for regional revitalization than other national plans and policies. This argument is referring to the levels of plans and policies and differing requirements in Table 3. That is to say, Japanese policies and planning has a broad scope ranging from high levels of policy down to detailed management action. This new system is more 'flexible' to respond effectively to revitalize 'specific' affected regional areas than traditional plans and policies created through bureaucratic systems such as those in Thailand. The argument is

**Table 3: Levels of plans and policies and differing requirements**

Plan and policy	Requirement
National level	Broadly concerned with co-ordination, mobilization and development of national resources, and requests for international assistance, rather than detailed management action.
Intermediate or Provincial level	Local implementation measures such as on-ground surveys, assessments and detailed relief rather than major decision making, which is the responsibility of the national level.
Local or Community level	Plans tend to cover a range of detailed counter-measures: to co-ordinate the activities of various existing services; and, to facilitate the participation of self-help groups and community members (especially where this encourages the utilization of traditional knowledge and skill including previous disaster-related experience).

Source: Authors, following Carter (1991).

supported by the existence of a specific act (Reconstruction Act), a specific national organization (Reconstruction Agency), a specific national council and specific affected areas. Japan's national specific policy and planning system is an interesting model that can be used to analyze Thailand's policy and planning process.

Thailand and other countries nowadays gear national development to a series of 'time-period plans' such as five-year plans. The merit of this kind of system is that it provides considerable flexibility for adjustment to unscheduled or unexpected events including disasters (Carter, 1991). Plans and policies in Thailand at all levels have driven through this time-period plan system for more than five decades. However, this system can also be an obstacle for readiness of policy and planning in times of emergency when disasters occur. Referring to Carter (ibid.), obstacles for readiness of policy and planning include the facts that:

- Plans and policies can become 'out-dated' and therefore ineffective.
- Plans and policies can be 'nominalistic' and therefore lack relevance.
- Plans and policies can become inappropriate due to changes in government organization or similar causes.

Nominalism in planning and policy processes, for example, can become an obstacle for plan and policy implementers. This circumstance has occurred in some countries, usually because of the lack of a clear national policy, inadequate funding, limited expertise, or other similar reasons. So what is very much needed in planning is realism, not nominalism.

For Thailand, this situation seems to have happened after the Great Flood in 2011 which revealed the limitations of the government to overcome obstacles to disaster policy and plans (Thawatchai, 2011). These include:

- Discontinuity of plans and policies.
- The fact that policies and plans support the mitigation process rather than prevention and preparedness.
- The fact that plans at the national level are unclear.
- Overlaps and no linkages between respective organizations.
- Lack of cooperation between government, civil society and the private sector.

Another obstacle for readiness in policy and planning is called 'moving the goalposts' (with reference to Carter, 1991). This metaphor means to change the criterion or goal of a process or competition while work is still in progress, in such a way that the new goal will intentionally bring about either an advantage or disadvantage to one party only. This usually brings about a major change to governmental policy, structure or organization. The result is that the plan or policy will no longer fit the reality of the situation; it must therefore be amended or serious problems will arise. Table 4 illustrates a sequence of events in disaster planning:

**Table 4: Sequence of events in a disaster planning and policy process**

Year X	The country was hit by a disaster, resulting in great damage, destruction and loss.
Year X + 1	The government, with assistance from the United Nations, produced a National Disaster Plan.
Year X + 3	Another disaster struck the country, the plan was brought into action and the situation was handled satisfactorily. The plan was subjected to a post-disaster review and, apart from minor amendments, was confirmed.
Year X + 7	A further disaster occurred and the plan was brought into action. This time, the plan did not work effectively.

Source: Carter (1991).

**Table 5: Sequence of the readiness of Thailand's planning and policy process**

Year	Readiness of Thailand's planning and policy process
2004	Tsunami hit the southern part of Thailand.
2004 + 1 = 2005	The National Civil Defense Plan and the National Preparedness Policy were established.
2004 + 3 = 2007	No big disaster occurrence but the Disaster Prevention and Mitigation Act was enacted as a delayed response to the tsunami.
2004 + 7 = 2011	The Great Flood in many parts of the country resulted in great damage but a weak governmental response.
2004 + 9 = present	Questions and doubts exist as to whether Thailand's policy and planning is ready to be used effectively to solve disaster problems.

Subsequently, it became clear that there were two major reasons why the apparently proven plan did not work in Year X+7:

- The plan had not been reviewed during the previous four years and had therefore become out of date.
- In the same four-year period, a new government had made significant changes to the government structure. Thus, the plan was no longer applicable to current circumstances.

From the above sequence this research reconsiders the readiness of Thailand's planning and policy process for disaster management:

Table 5 reveals that Thailand still has some obstacles to build readiness for planning and policy. These have resulted from the policy formulation system and implementation bodies themselves. From 2005 to 2011, the national plan was not reviewed and therefore it became out of date.

In Thailand, the planning and policy process regarding disaster management is formulated inside a hierarchical structure through a 'Single Command Authority', such as the establishment of the DDPM. According to the above chronology of Thailand's planning and policy, a 'top-down system' is found as the basis of the planning and policy process. It reflects the character of the Thai bureaucratic system that could be considered as both a strength and weakness of the country when disaster occurs. From the gathered evidence, this research found that Thailand has:

- A one way process of planning and policy formulation (top-to-bottom).
- A single policy program for various problems and local identities.
- Strong linkages between national, provincial and municipal plans but few community plans or respective organizations.
- Overlapping of different national plans.
- No specific acts for respective areas.
- A broad strategy.

Referring to the Japanese experience in planning and policy processes for disaster management, the timeline below (Table 6) was created as part of this research following the aforementioned sequence of Carter (1991).

Table 6 reveals Japan's experience in a timeline and that the Japanese people have learned lessons from two big disasters. In less than one year, Japan could respond to those disasters by rapidly reconsidering policies and plans. New plans, policies and other mechanisms were established shortly after each disaster occurred. This is a very fast policy formulation process, even though the national plan had not been reviewed between 1995 and 2011. This research views Japan's specific policy process as outstanding.

**Table 6: Sequence of Japanese experience in planning and policy processes**

Year	Japanese experience in planning and policy processes
1995	The Hanshin Awaji Earthquake.
1995 + 1 = 1996	The fast response of the Disaster Countermeasures Basic Act in 1995.
1995 + 3 = 1998	No big disaster occurrence.
1995 + 7 = 2002	No big disaster occurrence.
1995 + 16 = 2011	The Great East Japan Earthquake in 2011. All mechanisms are driven to respond as specific systems (e.g. specific acts, specific councils, specific organizations, specific plans).
1995 + 18 = present	New Japanese experiences are found as a specific regional revitalization system.

Source: Authors.

The sequence of Thai and Japanese policy and planning processes for disaster management as described above reveals a 'lack of readiness' of Thailand's policy and planning process. In order to ensure the readiness of Thai planning and policy process for disaster management, the following need to be considered:

- Continuity of policy and planning process.
- Cycle of policy and planning.
- Linkage between each policy and plan.
- Specification and flexibility of policy and plan for the implementation process.

From reviewing many types of evidence, this research argues that there is not yet a readiness in Thai's policy and planning process for regional revitalization against disasters and that policy decision makers or bodies are not yet much concerned by this. Most planning systems are in a 'time-period plan' format. Different kinds of five-year plans or three-year plans were established under previously mentioned obstacles. Thus, a reconsideration of policy readiness is needed and Thai policy decision makers at both national and local levels should seriously take this into consideration.

Additionally, a quite different aspect of administrative behavior in local government organization for autonomous policy implementation may be discussed for future research in accordance with this policy planning approach. Although policy after the Great East Japan Earthquake in 2011 was rapidly reconsidered in Japan, the success of the Japanese model including the Special Zone system and the Smart Community and Future City initiatives refers to policy implementation based on local government autonomous organizational behavior. In a bureaucratic system including national, prefectural and municipal government whether it is called a top-down system or not, autonomous policy implementation by local government is essential for regional revitalization against disasters not only in Thailand but also in Japan.

## 5. Conclusion

'Readiness' is a concept that has been treated by scholars primarily at the individual level, and mainly in the psychological literature on preparedness for personal change efforts. Used in this context, it refers to the degree to which policies and plans can respond to the current situation with an emphasis on the implementation of the process. Thus, policy and planning readiness is considered a critical precursor to the successful implementation of complex changes to current situations and risks.

For this research, policy readiness means how effectively policies and plans can respond to the current situation and how well implemented they are at different levels by different levels of implementing units or respective bodies. However, the unique character of the bureaucratic system in Thailand should be considered as one of the most important factors for creating a more effective policy and planning readiness as well.

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