



Disability inclusion in Shelter Management

Final Report

ASIAN DISASTER REDUCTION CENTER

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Ms. THANCHANOK NUNTATIKUL

Department of Disaster Prevention and Mitigation (DDPM)

Ministry of Interior, Thailand

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Chapter 1: Introduction

1.1 Background and Significance

The National Disaster Prevention and Mitigation Act B.E. 2550 (2007) and National Disaster Prevention and Mitigation Plan B.E. 2564 - 2570 (2021 - 2027) assigned all provinces, districts, and local governments to develop their own Disaster Prevention and Mitigation Plan which provide baseline data and guidelines for disaster risk management activities based on each area's context. One of important activities is shelter management. The temporary shelter will be a safe place for people, who are forced to leave their house because of disaster, to live for a while, where evacuees can get basic needs and maintain their human's dignity. Thailand gives priority to enhance capacity of local government in shelter establishment and management that are in line with international standard and consider different needs of each vulnerable group. Recently, Thailand has published the guidelines on temporary shelter establishment and management which is currently used as national guideline. However, the guideline only provides a general concept mentioning the consideration on people with disabilities or people who need special assistance during disaster but does not have specific details on how to prepare and manage the shelter to be accessible for these vulnerable people.

As Thailand becomes aged society, it is necessary to consider about challenges of increasing of elderly among regular people and people with disabilities. One of the challenges we are facing is that most of the buildings used as temporary shelter are government buildings such as school and temple, which are not designed or equipped with the facilities that are accessible for people with disabilities. We have seen that Japan has a lot of experiences and lessons learned in establishing and managing shelters during emergencies and is well-known as a role model on making a city livable for all, therefore, the study from Japan in this area will bring out valuable information for Thailand to improve its practices on preparing for inclusive shelter management that is accessible for people with special needs in the future.

1.2 Specific Aims

The objective of the proposed research are as follows:

- 1) To have an insight about Japanese standard, practices, and challenges on preparing and managing a disability-inclusive shelter.
- 2) To have an insight about specific needs of people with disabilities and people who take care of them.
- 3) To learn from the good example of accessible shelters.

1.3 Expected Results

The expected results are as follows:

- 1) Concrete practices of disability-inclusive shelter management in Japan.
- 2) Experiences of visiting some disability-inclusive shelters in Japan.
- 3) Recommendation for Thailand on how to prepare for disability-inclusive shelters such as design, facilities, and management.

1.4 Scope of Study

The research focuses on the development of practical guidance or recommendations for temporary shelter establishment and management in Thailand to be more inclusive for people with disabilities or special needs in preparation, management, and simulation exercise, by applying knowledge and experience from Japan.

Chapter 2: Shelter Management in Thailand

2.1 Legal Framework

According to the Disaster Prevention and Mitigation Act B.E. 2550 (2007), when a disaster occurs or is likely to occur, the local government of the affected area is required to setup emergency operations center (EOC) to direct, control, and coordinate emergency response operations within its jurisdiction. In case of an actual occurrence or a threat of a hazard within any area and is likely to inflict harm on persons residing in such area, Incident Commander at each level of disasters has authority to order evacuation of persons from that area as necessary to perform disaster prevention and mitigation operations as well as to arrange some temporary shelters for affected people for living or getting first aid, and properties safeguarding. Therefore, temporary shelter management is one of the crucial tasks that EOCs must operate in systematic manner to meet with standard and ensure that the evacuees are able to receive inclusive and equal assistances during their stay in the shelter. It is essential to prepare the shelter in appropriate with the number of evacuees to maintain their safety, healthy and sanitary.

There are suggested guidelines for evacuation and temporary shelter planning and management, as well as relevant activities that will support the shelter management to function effectively and can provide services continuously, mentioned in several parts of the National Disaster Prevention and Mitigation Plan 2021 - 2027 as follows:

Topic	Detail
Practice on risk acceptance	<ol style="list-style-type: none">1. <u>Conducting disaster management exercise</u> The National Disaster Prevention and Mitigation Plan 2021 - 2027 suggested that every level of the Emergency Operations Center (EOC) as well as each Emergency Support Functions should conduct a disaster management exercise at least once a year. The type and format of the exercise should be in accordance with objectives and scopes of the exercise.2. <u>Developing the evacuation plan</u> The EOC at all level has a responsibility to develop an evacuation plan and procedure for citizen and government sector. The plan should contain the following elements: list of evacuees, government agencies, and necessary facilities and resources, designation of evacuation areas suitable for accommodating the evacuees, clear-cut assignment of duties to all officers involved in evacuation, designation of primary and alternative evacuation routes for each type of disasters, as well as conducting inspection and preparation of vehicles, fuel supplies, energy sources, and communication system to ensure their readiness to support the evacuation operations.3. <u>Arranging evacuation areas</u> The EOC should designate safe and easy to access areas as well as organize layout and spaces to be suitable for temporary accommodating the evacuees.4. <u>Preparing and managing temporary shelter</u> The EOC should prepare action plan for the setup of temporary shelters for the evacuees by designating the existing physical facilities to serve as temporary shelters as well as ensuring the management of temporary shelter is in place. An efficient and appropriate

preparation to set up temporary shelter should include the following actions:

4.1 Designate the location to establish the temporary shelter sites by consulting with all stakeholders including vulnerable groups to select appropriate locations in consideration of safety to secondary disaster, accessibility, readiness of facilities and supplies, as well as setting up mechanism for temporary shelter management: opening, operating, and closing.

4.2 Manage a shelter by following the structure of temporary shelter management plan.

4.3 Determine minimum requirements for shelters to meet with the Sphere standard.

4.4 Manage and maintain a database of evacuees residing in a temporary shelter. The database should include the following information: demographic data, personal data, and administrative.

When disaster situation is no longer exist, the shelter manager will announce the closure of the temporary shelters and the shelter's staff will prepare for returning people to their home.

5. Developing business continuity plan (BCP)

The BCP is the action plan for the organization to perform their duties and deliver continuous services during crisis situation. Government agencies' BCP should focus on how to manage, maintain and protect their critical resources to ensure that the essential functions and services will stay resilient and keep benefitting the clients and stakeholders during disruption in accordance with the cabinet resolution dated 24 April 2012 and 31 March 2020. The government also promote and encourage the private sector in every business scale including SMEs to develop BCP.

6. Developing an effective multi-hazard early warning mechanism

Early warning system (EWS) is a very important function and one that has been proven to save lives and reduce loss of disasters. From concept to action, EWS is a structure of disaster management system and communication system for timely and effective dissemination of warning information to authorities and people in potential affected areas through various designated channels so that they can prepare for the disaster and evacuate to safe areas in time by taking into account the End-to-End EWS approach.

7. Preparing for the readiness of disaster management resources

7.1 Prepare stockpiling for relief items such as food, clothes, blankets, tents, medicines, machineries, tools and equipment for each type of disasters, as well as necessary supplies and supporting facilities.

7.2 Prepare other resources at all levels of government such as human resources, system and technologies, disaster information and specialists as well as jointly work with communities, private sector, NGOs and foundations.

	<p>7.3 Integrate resources among DRM-related agencies, estimate resources required for each type of disaster, set a logistics standard for stockpiling including resources procurement and safety stock, inventory control, stock management, inventory database, inspection and tracking system, maintenance system, skill trainings, mobilization planning, and manual development.</p> <p>7.4 Prepare budget covering disaster risk management cycle and for resilient recovery.</p>
<p>Guidelines for Emergency Evacuation</p>	<p>In case of an actual occurrence or a threat of a hazard within any area and is likely to inflict harm on persons residing in such area, an authorized person as stipulated by Article 28 of Disaster Prevention and Mitigation Act B.E. 2550 (2007) has authority to order evacuation of persons from that area in a systematic and organized manner as follows:</p> <p>1. <u>Emergency evacuation process encompasses</u></p> <p>1.1 Prioritization of evacuees by giving the first priority of evacuation to vulnerable groups such as patients with special healthcare needs, person with disabilities, the elderly, children, and women. The whole family which includes parents and their children should evacuate together in group.</p> <p>1.2 Arranging safety recipient location and temporary shelters to accommodate the evacuees and officials concerned on an appropriate and actual-need basis.</p> <p>1.3 Systematizing traffic flow in disaster affected area and the adjacent areas as well as in the evacuated shelter area.</p> <p>1.4 Assisting the evacuees in moving their property from the affected or nearby areas upon their requests.</p> <p>1.5 Arranging for evacuation reception registration for the purpose of checking numbers of evacuees and those who might be possibly left behind.</p> <p>1.6 Arranging public health and medical care services for evacuees.</p> <p>1.7 Assigning security police and volunteers to maintain peace and order in the evacuated shelter area as deemed appropriate.</p> <p>1.8 Designating and assigning liaison officer to communicate and coordinate with local police officers to deploy policemen to periodically patrol the evacuees' home areas for the purpose of safeguarding their deserted houses. In case of inadequacy of police staff, the liaison officer must request local Civil Defence Volunteer Unit to deploy its members to assist in patrolling, or organizing community volunteer to perform the task likewise. The patrolling is absolutely prohibited in case the situation is extremely dangerous in which the patrolling personnel might risk their lives. The patrol unit will once again resume their duties when such situation subsides.</p> <p>1.9 Arranging public relation service to disseminate disaster situation to keep the evacuees informed on a continuous basis to rid of their anxiety.</p>

	<p>2. <u>Termination of disaster declaration</u> It is imperative to conduct continuous and close monitoring of the ongoing situation and keep the public informed on a periodical basis to prevent public confusion. Concurrently, the relevant agency is required to explicitly confirm a termination of disaster declaration and informs the evacuees to prepare for returning to their residences.</p> <p>3. <u>Arrangement for returning home</u> Upon receiving the notice of termination of disaster declaration, a community leader or evacuee group leaders must organize and rank priorities of evacuee groups before beginning to return them to their original residence localities, as well as coordinating the return movement with the officials responsible for this movement and standby for further instructions and information.</p> <p>4. <u>Evacuation of affected and disrupted government entities</u> The affected and disrupted government entities including local administrative organization offices need to be temporarily moved to and relocated to resume their public service functions. In this connection, the EOC in locality is responsible for classifying and grouping the entities requiring most urgent evacuation to continue providing essential services to the public. In addition, the relevant EOC must anticipatedly determine the recipient locations for evacuated government entities. An evacuation of affected and disrupted government entities must be conducted in accordance with the evacuation plan for government entity.</p>
<p>Guidelines for Setting Up Evacuation Centre (Temporary Shelter)</p>	<p>Temporary shelter is the location prepared for recipient of evacuees who have forced to leave their residences due to effect of disaster. The evacuees will live in the temporary shelter until the termination of disaster situation or their houses are restored and able to live again. To manage temporary shelter in line with the temporary shelter management plan, the committee should ensure that appropriate basic needs are provided to evacuees including nutrition, food and drink, safety, welfare, utility supplies, as well as hygiene and sanitary. In this connection, the following action should be taken:</p> <p>1. <u>Opening the temporary shelter</u></p> <p>1.1 Arranging for evacuation reception registration which includes demographic data, personal data, and requirement of basic needs and special needs of each evacuee especially vulnerable groups. The registration data must be reported to the Local EOC.</p> <p>1.2 Arranging adequate food and drink as well as special needs e.g. infant formula.</p> <p>1.3 Arranging spaces and layout of temporary shelter by prioritizing evacuees' safety as well as individual issues such as medical restriction, gender aspect, and vulnerability.</p>

	<p>1.4 Arranging adequate and comprehensive utility system e.g. water supply and electricity.</p> <p>1.5 Arranging public health and medical care services to support evacuees' physical and mental health.</p> <p>2. Managing the temporary shelter</p> <p>2.1 Designating a clear role for the responsible person based on the temporary shelter management structure. Also, evacuees' participation and engagement in shelter management activities are important.</p> <p>2.2 Clarifying the basic rules for living in a temporary shelter to make all evacuees understand and follow them, as well as foster understanding and cooperation with the surrounding communities.</p> <p>2.3 Arranging public relations services to disseminate and update disaster information for evacuees continually.</p> <p>2.4 Arranging systems and assigning volunteers to maintain peace and order in the shelter or asking the evacuees to support this role as deemed appropriate.</p> <p>3. Closing the temporary shelter</p> <p>When the termination of disaster declaration is announced and evacuees are able to return to their residences or relocate to other safe areas, the temporary shelter management committee is required to do as follows:</p> <p>3.1 Announcing the closure of the temporary shelters in advance and organizing registration of returning evacuees.</p> <p>3.2 Coordinating with relevant officers to prepare for facilitation the return process in accordance with the plan.</p> <p>3.3 Officially announcing of the closure of temporary shelter and report to the Local EOC.</p>
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The National DPM Plan 2021 - 2027 also appointed the Emergency Support Functions (ESF) as a tool to support the National EOC operations during the incident. Each ESF is comprised of agencies that perform similar functions to coordinate operations in order to avoid duplication or overlap of providing assistances. The National EOC might consider to activate one or more ESF based on the complexity of the situation. In case of fully activation, there will comprise of 18 ESFs and Legal Affairs. The ESF 6: Social Welfare and Human Security is responsible for coordinating with and support agencies concerned in setting up temporary shelters. Ministry of Social Development and Human Security is designated as a primary agency to coordinate interagency efforts in support of emergency management operations under responsibility of ESF 6 including developing Social Welfare and Human Security Support Operational Plan. Ministry of Labour and Thai Red Cross are designated as support agencies.

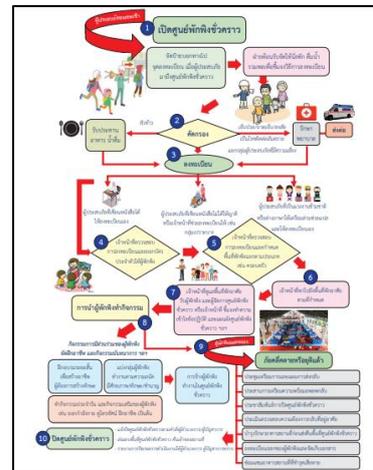
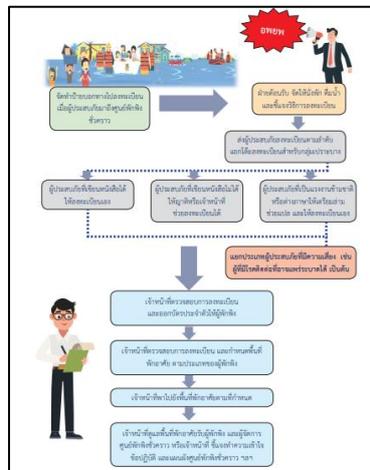
Moreover, the local government must set up annual budget needed for supporting the DRM activities within their respective jurisdictions, especially the annual budget required for providing immediate and long-term disaster relief and emergency assistances, including evacuation and temporary shelter management. The plan also defined role and responsibilities of line ministries and relevant agencies for collaborative and integrated DRM. In this connection, Ministry of Interior is tasked to support the temporary shelter management and to support the local government to implement DRM activities. Also, Ministry of Culture, Ministry of Education, and National Office of Buddhism are assigned to create the database of sites, buildings, or areas e.g. archeological sites, schools, and temples that can be used

as assembly point or for setting up temporary shelters or as a venue to facilitate the National and Local EOC's efforts in managing the incident.

In addition, apart from the sites designated to be a temporary shelter by the local government and above agencies. HM The King granted 240 million baht to DDPM, Ministry of Interior for construction of 12 temporary shelters namely "Oon Aai Rak Temporary Shelter" in the 7 provinces along the coastline which all sectors in these areas can utilize in normal and emergency situation.



2.2 National Guidelines



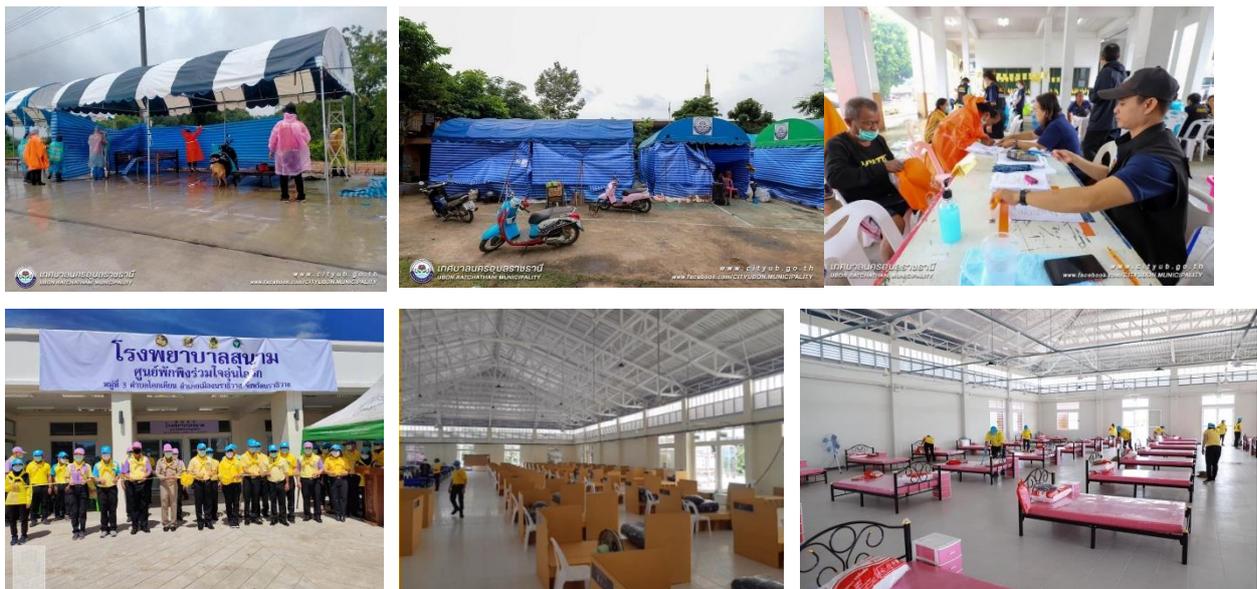
DDPM developed guidelines on temporary shelter establishment and management to be a framework for systematic temporary shelter management which is in line with international standards and follows the procedure mentioned in the Disaster Prevention and Mitigation Act B.E. 2550 (2007) and the National Disaster Prevention and Mitigation Plan 2021 - 2027 in order for ensuring unified coordination among stakeholders at all level in providing inclusive humanitarian assistance and basic rights protection for evacuees as well as increasing capacity on shelter management for public sector and civil society.

The scope of this guideline is divided into two parts: Part one focuses on criteria of temporary shelter area selection, establishment of temporary shelter management committee, space and layout design, and procedure of opening, operating, and closing temporary shelter, meanwhile, Part two gives examples of tools and concrete practices for the staff e.g. check list for temporary shelter establishment and management, basic rules for living in temporary shelter, related forms, and procedure of managing temporary shelter during Covid-19 situation.

The conceptual framework of the guideline refers to the Humanitarian Principles, International Humanitarian Law, Universal Declaration of Human Rights, The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response, Convention on the Rights of Persons with Disabilities, Inclusive Shelter Management and Social Protection Approaches. The aforementioned concepts are applied to Thailand's contexts.

The guideline emphasizes the arrangement of measures to ensure that the vulnerable population or people requiring special consideration are able to receive inclusive and equal assistance in accordance with contexts and needs of each vulnerable group, such as children, women, people with disabilities, the elderly, and migrants. It states about the difficulties and living conditions required by people with disabilities and the elderly, and suggests the preparation of suitable physical spaces and environments in a temporary shelter to ensure the good quality of life for these groups, such as wheelchair ramps, accessible toilets, space arrangement for wheelchair and changing space for women with disabilities that need support in dressing, handrails, medical services, and cooperation with specialist organizations in providing assistances.

Recently, Thailand has experiences in opening temporary shelter as follows: 1) Flood incident in 2022 - there were 331 temporary shelters established in 20 provinces and 2) Covid-19 situation - the Oon Aai Rak Temporary Shelters were used for local quarantine, vaccination center and field hospital. Additionally, the Oon Aai Rak Temporary Shelters have been used as a venue for CBDRM training program.



2.3 Training of Trainers course

The mega flood in 2011 accelerated the government’s awareness of the need for temporary shelter establishment and management to effectively accommodate large amounts of evacuees. After the incident, DDPM and International Organization for Migration (IOM) have collaborated on two Camp Coordination and Camp Management (CCCM) training projects during 2012 - 2014 for relevant agencies which are responsible for temporary shelter management namely: Ministry of Interior, Ministry of Social Development and Human Security, Bangkok Metropolitan Administration (BMA), and Thai Red Cross. As a result, 400 trainees have attended the trainings.



The National Disaster Prevention and Mitigation Plan, which was endorsed in 2015, prioritizes the government providing shelter management in accordance with international standards. Therefore, DDPM and IOM conducted CCCM Training of Trainers in 2020 aiming for increasing the skills and extending knowledge of 21 officers from relevant agencies, for which they can develop a concrete and update temporary shelter management plan which is in line with international standards and be inclusive on the special needs of vulnerable groups including migrants.



DDPM by the Human Development Institute of Disaster Prevention and Mitigation, is continually conducting Training of Trainers course on temporary shelter management to increase capacity for DDPM staff in regional centers and provincial offices so that they can expand knowledge to local and work with concerned agencies effectively. Temporary shelter management is also contained in other DRM training course to raise awareness among government officers. In local level, the disaster volunteers have also been trained on the basic temporary shelter management.



2.4 Simulation Exercise on Temporary Shelter Management

According to the National Disaster Prevention and Mitigation 2021 - 2027, a disaster management exercise should be conducted at least once a year at every level of the EOC, especially at the local and provincial levels, as they are the primary responsible agencies to deal with disasters that occurs in their jurisdiction.

Temporary shelter management is one of the key elements included in the simulation exercise. Normally, it is often designated to operate outdoors as a demonstration station during the full-scale exercise. Below is an example of area division for the Integrated Disaster Management Exercise 2016 and the exercise in the temporary shelter management station:



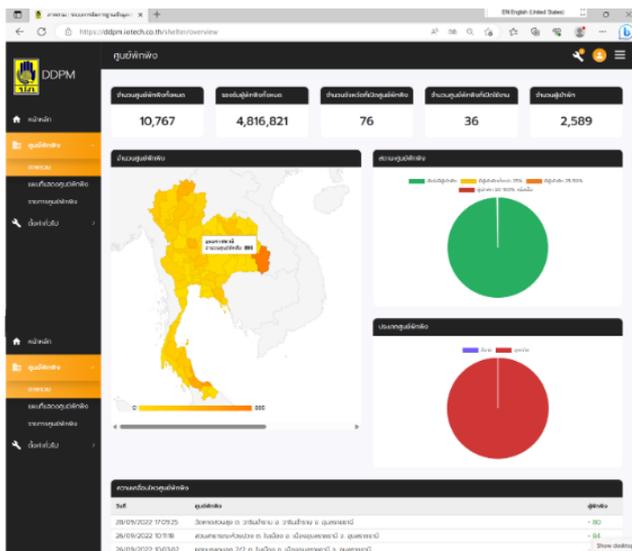


In addition, to strengthen capacity for government officers in charge of temporary shelter establishment and management, DDPM and IOM conducted two Table-top Simulation Exercises on Migrant-inclusive Collective Centre Management in Bangkok and Nakhon Sri Thammarat province. The content of the exercise comprises of key components for establishing and managing temporary shelter as follows: 1) roles and responsibilities, 2) establishment of temporary shelter 3) coordination mechanism 4) registration and information management 5) water, hygiene and sanitary system 6) food and relief items distribution 7) engagement and participation of community 8) protection and 9) closure of temporary shelter.



2.5 Decision Support System

DDPM by Disaster Victim Relief Division and Information Technology and Communication Center have developed the temporary shelter database nationwide. Currently, the system locates 10,767 shelters with capacity to facilitate 4,816,821 affected victims. The database can identify total number of emergency shelters, occupancy and vacancy, facilities, e.g., electricity and water supplies, restrooms, and parking spaces as well as person in charge and contact number. Moreover, the system is synchronized with navigator application (Google Maps) therefore can provide shelter direction to the users. However, the system does not allow public access, it is internal use only.



Chapter 3: Shelter Management in Japan

3.1 Legal Framework

The Basic Act on Disaster Management (enacted 1961) is a major disaster risk management legislation in Japan, and the Disaster Relief Act is the main law dealing with emergency relief in the emergency period after a disaster. The Basic Act on Disaster Management formulates a provision on protection of affected population and their livelihood which includes the following actions: 1) Prior preparation of the lists of the people requiring assistance in the case of disaster and Individual Evacuation Plans 2) Stipulation of the framework for wide-scale temporary evacuation stays and goods transportation 3) Clarification of the standards for evacuation centers and facilities in the case of disaster and 4) Improvement and expansion of protection measures for affected people. The Act sets up the disaster response mechanism in Japan, for which municipalities in affected area will be primarily responsible for disaster response, and if the disaster level is beyond their capacity, prefecture and central government will support the disaster response, respectively.

The Act appointed the mayor of a municipality to designate public facilities and other facilities that conform to the criteria specified by a Cabinet Order as designated Evacuation Shelters in order to secure appropriate evacuation shelters in the event of disaster. The Cabinet Order defined standards for designated Evacuation Shelters such as size of the building, capacity to accommodate evacuees with promptly appropriate facilities, and location that transportation can access easily as well as is less affected by a possible disaster. Moreover, in case of persons requiring special assistance, the Cabinet Office Ordinance for Enforcement of the Basic Act on Disaster Countermeasures specified about standards, measures, and systems that should be taken to ensure the smooth access, good living environment, and consultation/advice support for these people.

The Basic Disaster Management Plans in each level of disaster management are formulated based on the Basic Act on Disaster Management, comprising of national level, prefectural level, municipal level, and district community level. The plans stipulate the holistic activities based on disaster risk management cycle, and each local plan must be developed in accordance with the Basic Disaster Management Plan formulated by the National Disaster Management Council and has stakeholders participated in developing process. The local plans should describe about 1) education, training and other disaster management activities 2) disaster response measures including evacuation guidance and action plans for labour, facilities, resources, funds, stockpiling, transport etc. and 3) recovery from disaster. On the other hand, the district community plan should describe the following contents: 1) Activities in normal time e.g. evacuation drill, evacuation routes/shelters, special planning for vulnerable population, and stockpiling 2) Activities under warning e.g. evacuation order, information collecting and sharing, and civil safety confirmation 3) Activities on emergency e.g. evacuation guidance and support, shelter management and support for evacuees at home and 4) Activities on rehabilitation e.g. community-wide support for affected population.

After the occurrence of the Great East Japan Earthquake in 2011, it was determined to review the disaster management plan every year, and modify it if deemed necessary.

Additionally, the Tokyo Metropolitan Government Disaster Prevention Guide Book issued in 2020 defined persons requiring special assistance during a disaster including the elderly, persons with disabilities, seriously ill, infants, pregnant women and foreigners among others.

3.2 Japan's initiative on Welfare Shelter

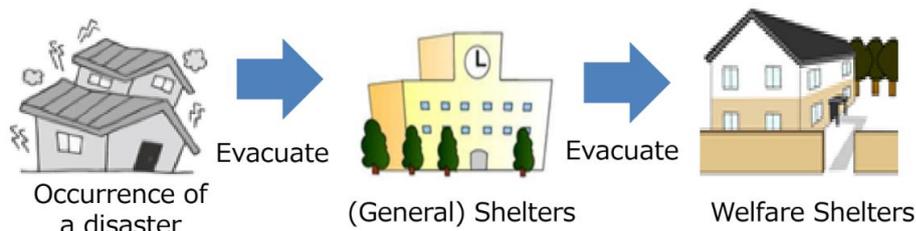
In the Great East Japan Earthquake, there were many problems arising during the disaster: casualties increased significantly with age of the victim, more than half of the casualties were elderly people aged 60 years or older, while the mortality rate of people with disabilities was about twice that of the general affected population, leading to the revision of the Basic Act on Disaster Management to add provisions to oblige administration to make efforts to secure and improve good-living environment of the evacuees at the evacuation

center. However, the Kumamoto Earthquake in 2016 emphasized the challenges in ensuring the quality of evacuation life, especially for those who require special assistance, as 76% of people died due to the physical burden of living in evacuation shelters after the earthquake.

To this end, the Cabinet Office has been holding the "Study Group on Securing Shelters and Improving their Quality" since July 2015 in order to study a wide range of issues related to promoting the designation of shelters and welfare shelters by municipalities, improvement of toilets in shelters, and development of support systems and consultation services for people in need of consideration, and to take necessary measures. In 2016, the Guidelines for Securing and Managing Welfare Shelters was formulated as a substantial revision and amendment of the Guidelines for Welfare Shelters' Establishment and Management released in 2008 which was not fully recognized, considering the lesson learned from the Great East Japan Earthquake. It recognizes that it is impossible to conduct emergency response in times of disaster without efforts in normal times, and emphasizes municipalities to primarily make such efforts regarding welfare shelters as well as preparation of Individual Evacuation Plans based on priorities.

Final Compilation of the Sub-Working Group on Evacuation of the Elderly and People with Special Needs based on Typhoon Hagibis in 2019 (Summary)	
Issues and Background	Courses of Action
<p>List of those who require assistance evacuating</p> <p>○ Although 98.9% of municipalities have completed the preparation of the list of those who require assistance evacuating, <u>they may not be able to accurately identify those who truly require evacuation support.</u></p>	<p>○ <u>Collaboration with key people and organizations in the community</u>, in addition to welfare professionals and medical professionals such as family doctors, <u>in order to prevent people who should be listed on the list of those who require assistance evacuating from not being listed.</u></p>
<p>Individual plans</p> <p>*A plan that includes information on evacuation support personnel and evacuation sites for those who require assistance evacuating (the elderly, people with disabilities, etc.)*</p> <p>○ In light of the fact that the elderly and people with disabilities have suffered* in past disasters, <u>some measures are needed to make evacuation support even more effective in times of disaster.</u></p> <p>*Percentage of deaths attributed to the elderly in past disasters *The Heavy Rain Event of July 2020: approx. 79% (65 years and older) (of which, approx. 85% in Kumamoto Prefecture) *Typhoon Hagibis in 2019: approx. 65% (65 years and older) *The Heavy Rain Event of 2018: approx. 70% (among those dead in Ehime, Okayama, and Hiroshima Prefectures, 60 years and older) (of which, approx. 80% in Mabi-cho, Kurashiki City, which has the largest number of fatalities by municipalities) (70 years and over)</p> <p>○ When considering the priority of those who need individual plans and the contents of these individual plan, <u>information on the physical and mental conditions and actual living conditions of the person concerned is necessary.</u></p>	<p>○ <u>In order to make evacuation support effective in times of disaster, it is effective to formulate individual plans.</u> Position individual plans as something that <u>municipalities must strive to formulate under the system</u>, and further measures are promoted.</p> <p>○ <u>The municipality takes the lead in formulating the plan</u>, in collaboration with welfare professionals, Social Welfare Councils, Welfare Volunteers and <u>other daily supporters</u>, and local residents.</p> <p>○ <u>Formulate individual plans starting with those with the highest priority</u>, such as those who live in areas at high risk of disaster. At the same time, <u>formulate an individual plan to be filled out by the person (or community, depending on the situation).</u></p> <p>○ It is important to create a system to <u>support the securing and training of human resources</u>, to provide financial support for the efforts of municipalities to <u>formulate individual plans</u>, and to implement and verify measures by setting up model districts.</p>
<p>Welfare shelters, etc.</p> <p>○ <u>Some people request that they may be able to evacuate directly to the facilities they use on a regular basis.</u></p> <p>○ It has been pointed out that if <u>they are announced as designated shelters</u>, there is a concern that the evacuation of affected people who are not expected to be accepted will hinder their response as welfare shelters, <u>thus preventing the securing of welfare shelters as designated evacuation centers.</u></p> <p>○ In addition, <u>there is a lack of clarity on the positioning and nature of welfare shelters and other facilities and spaces</u> where persons requiring special care can evacuate to and receive welfare support.</p>	<p>○ Through the process of formulating individual plans, <u>coordinate the recipients of each welfare shelter in advance</u>, and promote direct evacuation to welfare shelters.</p> <p>○ <u>For each welfare shelter, the target group of acceptees will be specified and publicly announced</u> at the time of designation in order to <u>clarify that the shelter is for evacuation of these acceptees and their families only</u>, and to promote acceptance of evacuees at welfare shelters.</p> <p>○ Clarify that even <u>small facilities and spaces</u> should be designated as welfare shelters if they are expected to be used mainly by persons requiring special care.</p>
<p>Community Disaster Management Plan</p> <p>○ The Community Disaster Management Plan is expected to <u>contribute greatly to evacuation behavior at the local community level</u> and to play a very important role in <u>putting individual plans into practice</u> by identifying those who require assistance evacuating and calling for evacuation.</p> <p>○ With regard to the dissemination of Community Disaster Management Plans, one of the challenges is that there is a <u>lack of planning supporters</u> (e.g., local experts on disaster prevention, municipal officials) who can provide advice and guidance to increase the momentum of local residents when they prepare a draft plan.</p>	<p>○ In addition to measures for the <u>dissemination and education of Community Disaster Management Plans</u>, such as through case studies, establish a system to <u>support the preparation of draft plans and a system to develop human resources.</u></p> <p>○ In addition to <u>encouraging the development of individual plans and prioritizing those with the highest risk of disaster</u>, create an environment where people from various fields in the community, such as those who understand disaster prevention, welfare, and medical care, are <u>involved so that the development of the draft of the Community Disaster Management Plan can involve all people in the district and be consistent with the individual plans</u>, if any.</p>

Source: Cabinet Office data



In addition, the Sub-Working Group Concerning Evacuation of the Elderly and people with special needs Based on Typhoon Hagibis in 2019 suggested the importance of establishing a system to clarify that each welfare shelter is a facility for evacuation of accepted recipients and their families, by specifying the target population and publicly

announcing it at the time of designation. In light of this, the Guidelines was revised again in 2021 considering the lesson learned from 2016 Kumamoto Earthquake, 2018 Heavy rain, 2019 Typhoon Hagibis and 2020 Torrential rain, also, a Public Notification System to Identify Those Who Will Be Accepted into Welfare Shelters was established to eliminate the unexpected evacuation of affected people and to support logistics planning and arrangement for the accepted evacuees.

The expense rate for the establishment of a general shelter and a welfare shelter is stipulated in the Disaster Relief Act.

3.3 Implementation of Welfare Shelter in Hyogo Prefecture

The Great Hanshin-Awaji Earthquake brought several key lessons learned to Hyogo Prefecture to improve its preparedness for future disasters in order for making the prefecture to become a disaster-mitigation society with resilience and speed to recover first from disasters. Hyogo Prefecture is focusing on developing and implementing an action programme against the Nankai Trough Earthquake and Tsunami for the purpose of minimizing possible damages and deaths, strengthening safety culture and best use of know-how/expertise and equipment/facilities, and improving disaster response and livelihood recovery capacities. Therefore, the action programme is ongoing with key initiatives such as quakeproofing of public buildings and residences with aiming that 100% of schools and 97% of residential buildings must be retrofitted and establishing an evacuation system targeting no one left behind and conducting tsunami evacuation drill in areas with risk of flooding in the wake of earthquake every year. In this connection, Hyogo has developed a tsunami guidebook and designated emergency shelters, as well as developed a public wireless system for DRR and installed loudspeakers to provide evacuation guidance, etc., besides, Hyogo Prefecture wrote a song for Tsunami Awareness, “Run to the Higher Ground”, so that people can easily remember the evacuation guidance. Additionally, the prefecture has created and encourage people to use “My Evacuation Card” to plan an individual evacuation process ahead of disaster and promoted the utilization of Hyogo Emergency Net App in order for receiving warning messages and instructions timely.



Taking into account those who need special consideration due to difficulties in living in shelters, the Welfare Evacuation Shelters are established to receive eligible persons who are transferred from general shelters, along with the preparation of Individual Evacuation Plans. As of 1 December 2022, there are about 1,100 places in Hyogo Prefecture designated as Welfare Evacuation Shelter. The prefecture also developed Manual on welfare evacuation shelter operation and training, which sets up the process of operating welfare evacuation

shelter divided into 5 phases: 1) Preparation 2) Opening and Acceptance 3) Operation Establishment 4) Operation Stabilization and 5) Final. When the persons requiring special care are identified including those who have difficulty living in general shelters, they will be transferred to welfare evacuation shelters and then the government will support personnel to assist the operation in welfare evacuation shelters.



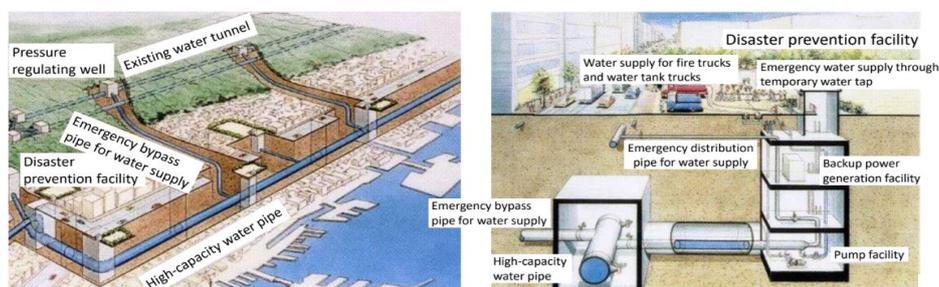
City name	# Total Welfare Evac. Shelter	XXX	City name	# Total Welfare Evac. Shelter	# of shelters designated by law
神戸市	402	359	丹波市	25	9
姫路市	73	0	南あわじ市	6	6
尼崎市	44	0	朝来市	14	14
明石市	22	21	淡路市	8	0
西宮市	34	3	宍粟市	19	1
洲本市	11	4	加東市	33	0
芦屋市	17	17	たつの市	20	20
伊丹市	40	3	猪名川町	1	1
相生市	20	20	多可町	12	0
豊岡市	35	35	稲美町	6	3
加古川市	32	0	播磨町	13	13
赤穂市	7	0	市川町	2	2
西脇市	8	8	福崎町	5	5
宝塚市	24	24	神河町	6	6
三木市	22	22	太子町	7	0
高砂市	11	4	上郡町	12	12
川西市	15	15	佐用町	12	0
小野市	12	3	香美町	10	0
三田市	28	5	新温泉町	13	1
加西市	15	1	計(R4.12.1)②	1,109	643
丹波篠山市	6	6	計(R3.12.1)①	1,104	614
養父市	7	0	増減数②-①	5	29

3.4 Implementation of Welfare Shelter in in Kobe City

Kobe City sets up disaster response plans into 2 levels. Level 1 is to respond to once in 50 - 100 year disaster which structural measures and damage prevention will be considered. While, level 2 is to respond to maximum expected size of disaster (once in over 100 - 1,000 year disaster) which structural and non-structural measures must be driven together and it prioritizes the protection of human lives.

The city has staff deployment plan to ensure the readiness of disaster response in the event of a disaster. Regarding of the level of emergency alert, Kobe City has followed the five warning levels which were modified the warning information to be more easy-to-understand so that residents can intuitively understand what actions to take, and were first put into operation during the flood season of 2020. After gathering forecasted and relevant information, Kobe City will determine the specific timing of the announcement of disaster warning and evacuation information/order. At Level 3, those who take more time to evacuate e.g. people who needs special assistance should start evacuation, and at Level 4, all those who are in areas at risk of disaster should evacuate. In case the level of emergency alert is at Level 5, a disaster has already occurred and it may be dangerous to move outdoors to a designated emergency evacuation site, therefore the citizens should stay inside the building and take the best action to protect their life.

With experiences and lessons learned from the Great Hanshin-Awaji Earthquake which caused a large number of evacuees (maximum 236,899 people), evacuation centers were set up in 599 locations, and lifeline services were damaged for 7 - 135 days, Kobe City has implemented disaster countermeasures to secure good living conditions during disaster situations, such as constructing a backup water supply system and the sewer network system underground in the urban area to ensure all residents can access water supply for three liters per person for 12 days during an emergency period and to prevent disruption if any of the four treatment plants stop functioning, improving the evacuation shelter environment by ensuring emergency stockpiles, and installing air conditioning and external power supply facilities in school's gymnasiums and special-needs classrooms.





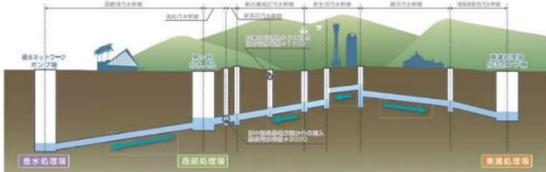
Partitions and tents for shelter Source: The Sankei Shimbun



Air conditioners installed in the gymnasium



The ceiling lighting (part) of the shelter is lit.



Drinking water (12-year shelf life) Alpha rice (For dialysis patients) Cookies (7-year shelf life) Accommodating food allergies and halal diet Risetto (7-year shelf life) Accommodating food allergies and halal diet Thermal blanket Baby bottles Emergency heat packs

The city has also put efforts on raising public awareness about disaster prevention. The memorial events of the Great Hanshin-Awaji Earthquake have been conducted annually, together with DRR activities such as exhibition, demonstration, and drill. The famous event initiated by Kobe City, Iza!Kaeru Caravan!, gains a lot of attention and engagement from schools and communities as well as vulnerable population e.g. elderly person and people with disabilities to join the DRR activities and it was widespread in many countries as well. Through several DRR activities, BOKOMI system (DRR Welfare Community) has been strengthened and continually active in conducting DRR and Welfare activities since its first establishment in 1996. Town Watching is also an attractive activity that leads community members to survey and collect information about the changing environment in their town as well as potential risks and vulnerable issues, including those who need special assistance evacuating. With these efforts, the city can use the collected information to plan to reduce those risks as well as to develop evacuation maps for vulnerable groups. The citizen can check the status of evacuation shelters through application VACAN which provides real-time information on which shelters are open and how crowded they are.



- **Stockpiles Base (7 bases)**
- (i) Konan Elementary School Warehouse (Higashinada Ward)
 - (ii) Shiawase no Mura (Kita Ward)
 - (iii) Maruyama Community Centre (Nagata Ward)
 - (iv) Myodani Community Exchange Centre (Tarumi Ward)
 - (v) Kobe Winery (Nishi Ward)
 - (vi) Kobe City College of Nursing (Nishi Ward)
 - (vii) Ogo Environment Centre (Nishi Ward)



As of April 2023, 402 sites are designated to be welfare shelters for evacuees who need special assistance or have difficulty living in general shelters. The following items are prepared for the welfare shelters: cardboard beds, portable toilets, changing tents, disposable diapers for adults, stockpiled food (nutritional food for easy swallowing), writing utensils, and white cane. However, Kobe City also goes further to establish a unique system to solve the problem of the opening of welfare shelters that require an assessment of evacuees before opening as secondary shelters by designating 21 special nursing homes in the city to be “Core Welfare Shelters”. These shelters can open promptly at the request from the city and immediately accept persons requiring assistance. The Core Welfare Shelters will secure special supplies for persons requiring assistances which can be used for 3 days. There are 7 major stockpiles bases for the person requiring assistance. Furthermore, Kobe

City formed a disaster agreement on procurement and on transport services for persons requiring assistance. Since the establishment of the Core Welfare Shelters, Shelter-Opening drills has been conducted every year totally 6 times until now with various kinds of disaster scenario.

(Example of stockpiled items)

Types	Items (examples)
Foodstuffs etc.	Drinking water, alpha rice, canned food, retort pouch food, food for the elderly (e.g. thickeners, high-calorie food)
Household goods, etc.	Blankets, towels, rugs, cardboard beds, cots, toothbrushes, mouthwash,
Nursing and hygiene products, etc.	Diapers, portable toilets, toilet coagulant
Medical supplies (supplies to combat infectious diseases)	Medicine, bandages, blood pressure cuffs (Masks, face guards, plastic curtains, disinfectant)
Other disaster relief supplies, etc.	Floodlights, lanterns, generators, cassette cylinders, portable power supply, portable radios

3.5 An example of best practices for Disability Inclusion in Shelter management at Beppu City

The Beppu City Disability-Inclusive Disaster Prevention project is based on Article 12 of the "Beppu City Ordinance for Safe and Secure Living for People with or without Disabilities" established in Beppu City in 2014. The project was implemented following the government's direction of measures regarding the registers of those who require assistance evacuating and Guidelines for Ensuring Satisfactory Living Conditions at Shelters under the amendment of the Basic Act on Disaster Management in 2013, by working together with the local government, local residents' associations, and welfare personnel for three years since 2016. A key challenge is that the role of welfare professionals in disaster support activities has not been clearly defined based on laws, contracts, etc., and the information they possess has not been organized into a shared system based on the Act on the Protection of Personal Information. The project is considered a case study of silo-breaking practice, which aims to create a system to protect lives and livelihoods by preparing individual support plans for persons requiring special care in times of disaster, sharing information, and conducting evacuation drills and evacuation shelter management.

There are 6 steps the project used for developing integrated individual evacuation plans as follows: Step 1 - Individual Assessment, Step 2 - Community Assessment, Step 3 - Disaster Care Plan Coordination Meeting, Step 4 - Plan Drafting, Step 5 - Confirming Plan Contents and Individual's Agreement to Share Personal Information, and Step 6 - Review and Improving Through Inclusive Bosai Evacuation Drills.

The Make Your Own Disaster Prevention Notebook for Peace of Mind, created by the Research Institute of the National Rehabilitation Center for Persons with Disabilities, is used in Beppu City by welfare professionals to work with people with disabilities and their families to assess the potential damages to their lives and assets and support they need. Based on this information, the consultation meetings among disaster officers, welfare professionals, persons with disabilities and/or their family and residents' association were conducted to draw up and convey agreement on individual support plans and the contents of the support needed. Various opinions are given as to whether the community can take on this responsibility and, if so, what kind of support is possible. After that, people with disabilities participate in actual evacuation drills and evaluate the content of the individual support plan.

There were two example cases of Beppu City. One was Yumi-chan, a child with special needs who has social and communication difficulties, cannot walk by herself for a long distance, and needs mother to always be by her side. Another one was a man with electric wheelchairs. These two people need different methods in evacuating, so the community has to develop different individual evacuation plans for both of them and conduct the drill to test the plan. For example, we have to think about how long the battery of the electric wheelchairs

can work, how many people needed to help the man, which shelter suits the man the most. We found that the battery is always fully charged and can work for 6 hours but the wheelchair cannot move by it own on the hill, so 3 men have to help him and he can stay in the welfare space with other people with disabilities. Meanwhile, Yumi-chan case is more challenging to deal with. She has to evacuate while sticking with her mother all the time and easily to scare of unfamiliar environment. So, the community decided to evacuate her and her mother by using a rear car which requires a lot of manpower but can provide safe feeling to Yumi, and the private room with family was arranged in shelter for her as well. The project succeeded because of the engagement of all stakeholders in creating integrated individual evacuation plans.



3.6 Process of developing Individual Evacuation Plans

The amendment of the Basic Act in Disaster Management in 2013 and 2021 gave direction to municipalities to make effort to create Individual Evacuation Plans in conjunction with the creation of registers of those who require assistance during an evacuation as mentioned in the Guidelines for Supporting the Evacuation Behavior of Those Who Require Assistance Evacuating, and in 5 years, it will be obligated to create Individual Evacuation Plans in all municipalities in Japan.

There are 7 steps presented in the Action Guidelines as follows:

Step 1 - Development of a promotion system within and outside the city office

Step 2 - Selection of targets based on priority

Step 3 - Explain the significance of creating a plan to social workers/welfare professionals

Step 4 - Explain the significance of creating a plan to community residents who will be evacuation supporters

Step 5 - Gathering basic information about the person and Prior Coordination with relevant parties (ex. welfare professional and families)

Step 6 - Creating Individual Support Plans with city officers, people with disabilities, families, welfare professionals, and community members

Step 7 - Conducting drills and other activities to confirm the effectiveness of each Individual Support Plan.

Chapter 4: Key findings and Recommendations

Based on learning information in Chapter 2 and 3, lectures and participation in/observation of DRR activities through the ADRC VR programme, I found that there are similarities between Thailand and Japan that enable the development of inclusive temporary shelter management as follows:

1) Legal Framework

The two countries have major laws on disaster risk management that state the role of local authorities in developing a local disaster risk management plan in normal times, which includes creating a list of vulnerable people or persons requiring special care during disaster, developing evacuation plans and designating safe areas for establishing an evacuation shelter, as well as assigning responsible staff, preparing resources, supplies, and logistics in need for temporary shelter management as well as BCP plans, and conducting simulation exercises for evacuation and temporary shelter management. Meanwhile, during disaster times, the local government has authorities to order and facilitate evacuation as well as establish and manage temporary shelters.

2) National Guidelines

The two countries have national guidelines for temporary shelter management, along with the procedures for opening, operating, and closing temporary shelters and the concept of protection for vulnerable people, including arrangements for special needs, appropriate spaces and facilities, and public health and medical care services.

However, Japan's initiatives for supporting those who need special assistance in times of disaster are more advanced. The initiatives of welfare evacuation shelters have been introduced since 2008, and the Guidelines for Securing and Managing Welfare Shelters was formulated in 2016, emphasizing municipalities to primarily make efforts in preparing welfare shelters and creating Individual Evacuation Plans based on priorities.

While Thailand is focusing on selecting and designating public buildings/spaces such as schools, temples, and archeological sites to be evacuation shelters, except the 12 Oon Aai Rak Temporary Shelters which were constructed to be directly used as temporary shelters, it is good to learn from Japan's concrete practice to cooperate and designate welfare/healthcare centers as evacuation shelters for people requiring special care because of the readiness of suitable accommodation and facilities. Moreover, some municipalities, like Kobe City go beyond this by initiating core welfare shelters to reduce the burden of the city and people requiring assistance in transferring from general shelters to welfare shelters, together with implementing disaster countermeasures to secure good living conditions for citizens during disaster situations. Also, the Michi-no-Eki Arai in Myoko City, Niigata Prefecture, is also a good initiative in the utilization of Michi-no-Eki for DRR purposes and is suitable for serving as an evacuation shelter. It is complex facilities comprised of shops and restaurants, parking spaces, resting areas, 24-hour accessible toilets, 24-hour childcare support facilities, communication facilities, cooking buildings, power and water supplies, etc. Furthermore, alliance forming among local governments is one good method for pre-agreement to support each other in relief, emergency shelter, and recovery including dispatched staff.

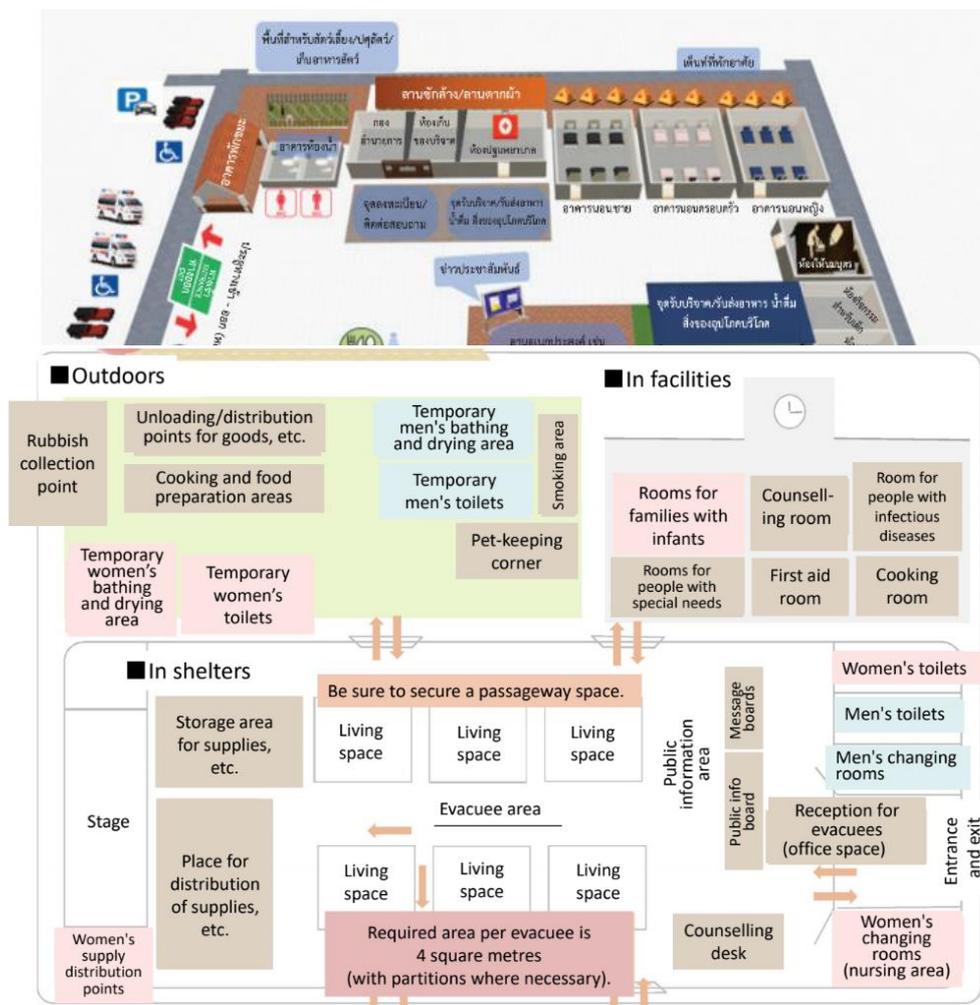
To achieve inclusive temporary shelter management, it is needed to break the silos and enable a working environment with local government, disaster professionals, welfare professionals, and local residents' associations. The Beppu City Disability-Inclusive Disaster Prevention Project is one of the successful case studies in developing comprehensive community evacuation plans and drills that integrate individual support plans for people requiring special assistance.

In addition, digital technology such as GIS and satellite data can be applied in risk-informed planning, such as developing flood shelter suitability maps to select priority areas for flood shelter construction as well as to create data insight of and monitor vulnerable groups in communities and shelters. Although Thailand and Japan have developed applications for monitoring the status of evacuation shelters to support decision-making in opening and managing shelters, Thailand's application is not for public use but only for internal use and does not have information about the shelter's capacity to receive people

requiring special assistance. The GIS and satellite data were also mostly used for emergency response, not DRR. On the other hand, Japan's application allows citizens to access and use it for evacuation decisions.

Regarding training, Thailand considered temporary shelter management an important issue after being triggered by the mega flood in 2011 and started training the officers with technical support from the International Organization and Migration (IOM) in 2012. The training modules for temporary shelter management have been developing, and have just become more concrete and practical with Thailand's context when the national guidelines was published and Table-top exercises were conducted in 2022 with support from IOM. While, it seems the Prefectures and Municipalities in Japan developed their own manual for shelter operation and training. The Kansai University's Bosaishi program activities is developing human resources who are capable to work in real situation such as facilitating evacuation drill and supporting shelter management.

The two countries do not have a general layout standard for every evacuation shelter but adjust the layout and space arrangement as appropriate for each building, considering minimum standards such as required spaces for individuals and gender aspects. Below pictures are examples of a recommended shelter layout that Thailand and Japan use as reference:



However, Aging and Shrinking Society has become a very serious issue in Japan and it has been affecting government and community's capacity in responding to disasters. It is said that one of the reasons why the government began to emphasize "to evacuate or not is individual's judgement and you must protect your life by yourself first" after the heavy rain in 2018 is that resources to support evacuation are becoming scarce both in the government

and in the community. Therefore, we have to consider how to support people who cannot evacuate and protect their lives by themselves with limited resources.

Moreover, there are also needs for preparation in the case of a massive and prolonged evacuation. The recent earthquake in Noto Peninsula also emphasizes the difficulties for evacuees and officers to live and work under conditions that are inaccessible to water supplies, and heavy snow also slows the recovery operations. At least two large-scale disasters were anticipated within the next 30 years, for which Japan has to prepare countermeasure plans. One is Nankai Trough earthquake and another one is Tokyo Inland Earthquake. It is possible that the Tokyo Inland Earthquake will cause damages to many buildings and fires might spread for 2 days and the critical capital functions as well as public utility services might be disrupted for 1 day - over 1 month. Moreover, it is expected that maximum 7.2 million of evacuees has to evacuate under the power and water disruption, and approximately 3.8 - 4.9 million of citizens might be stranded in Tokyo. Currently, The Disaster Management Bureau of the Cabinet Office of Japan is putting its efforts to develop the plan for countermeasure against Tokyo Inland Earthquake and implement the plan among target groups and areas. The plan sets goals to reduce the number of deaths, building collapse, and fire to half from the maximum estimation which need to be achieved in 10 years. At the same time, the government also encourages people to retrofit seismic-resistance to their house and office buildings should be prepared for being a shelter and stockpile during emergencies. It is very important that public and private sector as well as the community should build cooperation on disaster reduction. Handing over the key to open shelters and emergency equipment storage to the BOKOMI communities as well as conducting Iza! Kaeru Caravan! are good ways to increase communities and local stakeholders' capacity, engagement and ownership. Additionally, the Cabinet Office is studying the possibility of using subway stations as evacuation shelters.



Japan also has to increase awareness of the roles of welfare shelters among communities and establish a public notification system to identify those who will be accepted into welfare shelters, as some research has pointed out that people who need support and their supporters did not know about the welfare shelters and stayed in their damaged houses, while people who did not need special support evacuated to the welfare shelter because of their lack of information about the roles of the welfare shelter. Furthermore, there is a need to consider the manpower needed to support the welfare shelter; the longer it is in operation, the greater the burden on the staff in the welfare facility. Therefore, the welfare facility designated as a welfare evacuation shelter needs to add the operation procedure of the shelter to its BCP and make a mutual support network among the community, company, welfare association, NGO, including volunteers, etc., inside and outside of the region.

Chapter 5: Conclusion

The learning from Japan's experiences and practices are very valuable and can apply to improve Thailand's temporary shelter establishment and management to be more inclusive for people with disabilities or special needs in preparation, management, and simulation exercise.

The definition of people requiring special assistance is cover all type of vulnerable people who are unable to evacuate by themselves or live in shelter without special cares, including people with disabilities and elderly people.

However, comparing to Japan, Thailand has never experienced large-scale disasters which cause large-scale disruption in public utility services in long period, and large amount of death, injured and evacuees. Usually, the major of disaster in Thailand is floods which might force people in some areas to evacuate and stay in shelters around 1 - 3 months in maximum.

Unfortunately, the researcher does not have the opportunity to observe the real situation or the simulation exercise of temporary shelter management when arranging to accommodate people who require special assistance. Moreover, it is difficult to summarize all lessons in detail due to time constraint and language barrier.

The following items are key lessons that can improve Thailand's practices on preparing for inclusive shelter management that is accessible for people with special needs:

1) Utilizing GIS and satellite data for collecting demographic and risk information to create maps and databases of people who need special assistance during disaster and safe areas for establishing temporary shelters.

2) Developing an application that is accessible for publics and inputting information about shelter's capacity to accommodate people requiring special assistance to reduce traffic in one shelter and support decision-making for evacuation routes that leads to suitable temporary shelters.

3) Engaging collaboration among local stakeholders, especially disaster officers, welfare officers, medical officers, volunteers, and community members including vulnerable people, to discuss and create Individual Evacuation Plans by following 7 steps mentioned in Guidelines for Supporting the Evacuation Behavior of Those Who Require Assistance Evacuating, and test the plan during evacuation exercise, if possible, in shelter management simulation exercise too.

4) Developing BCP for each temporary shelter to ensure its continuity in providing services during disruption. Meanwhile, the suppliers should also have BCP to ensure their capacity to deliver supporting services to temporary shelters.

5) Cooperating with welfare or healthcare centers / facilities to be designated and be trained to serve as welfare shelters for people who need special consideration during disaster.

6) Working with professionals and volunteers to create community-building activities in temporary shelters to strengthen new community relationships among evacuees in order to leave no one behind.

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