



**Visiting Researcher Program 2018 B,
Asian Disaster Reduction Center (ADRC)**

**Good Practices in Japan concerning with
Community- Based Disaster Risk Management
(CBDRM)**

**Ei Shwe Sin Win
Department of Disaster Management, Myanmar
(ADRC Visiting Research Japan)**

April 019



ADRC Visiting Researcher 2018 Term B (January – April 2019)

Disclaimer

This report was compiled by an ADRC visiting researcher (VR) from ADRC member countries. The views expressed in the report do not necessarily reflect the views of the ADRC. The boundaries and names shown and the designations used on the maps in the report also do not imply official endorsement or acceptance by the ADRC.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

Acknowledgement

This study “Good Practices in Japan concerning with Community - Based Disaster Risk Management (CBDRM)” is very useful for me who has the chance to join the Visiting Researcher programme of Asian Disaster Reduction Center (ADRC), Japan. I have the reasons why I want to choose that topic. Our country is also taking steps to a balance between peace and development. Nowadays, every country including Myanmar in the world is facing the effects of climate change and also the gap of unequal development. As a result, most of countries have been experiencing the attack of unexpected natural disasters. A disaster can put development gains at risk because it is directly linkage with development. Therefore, all countries in the world need to consider having the best plan on DRR and DRM.

In Myanmar, though we have Disaster Management Plans at all levels, we need to update/ develop the old ones according to the time and circumstances of the country's situations. At the present time, our Department, DDM is taking the activity on the process of updating DM plans in the designated levels. To be the effective and efficient plan, we have to use a people-centered and inclusive approach since the backbone of the country is our citizens who are the first responders to disasters. Moreover, DRR is Everyone's business. Hence, we must try to get the interest of public and their strength in DRR projects. At the same time, we must to conduct the process of public awareness on DRR. Community participating on implementing the DRR process is very important. One of my ambitions is that I will be able to more contribute in my Department functions as a well-trained staff.

Japan has the good experiences concerning with DM plan. Similarly, community participating on DRR process is very strong. Japan has many experiences to respond disasters in all phases such as before, during and after. For these reasons, my expectation



ADRC Visiting Researcher 2018 Term B (January – April 2019)

is to study the good practices in Japan about CBDRM and how to support that process by the Japanese Government.

To fulfill my expectations and my ambition, I got the effective and valuable supports and cooperation from ADRC, the persons who work for Government Sector, Private Sector, Community Leaders and some professionals on DRR provided me the important information and share some documents, data, their knowledge and experience relating on my research. Also, to full concentrate on my research, my seniors, juniors and colleagues from our Department, DDM help and support everything I want. I feel thankful for their continuous support to me.

My deep appreciation goes to the Government of our country, Ministry of Social Welfare, Relief and Resettlement and ADRC for providing me this kind of great opportunity. I would like to thank Mr. Kouji Suzuki (Executive Director), Ms. Akiko Nakamura, Ms. Miki Kodama and Mr. Makoto Ikeda who gave us the valuable lectures, kindness and guidance. Especially I would like to thank Ms. Yumi Shiomi who gives us the great help and arranges the schedules for VRs. She can manage everything to be convenient for us. I would also like to thank the rest ADRC staffs for sincere support during my stay in Japan including two VRs from Thailand and Philippines who can understand my weaknesses and always encourage me all the time. I possessed the sweet memories. Finally, I am fully thankful to my family who want to be proud of me and the ones from my Department who are being shared my responsibilities and duties.

Ei Shwe Sin Win
Visiting Researcher (from Myanmar)
January to April, 2011 (FY2018 B)



ADRC Visiting Researcher
2018 Term B (January – April 2019)

Table of contents

Chapter 1 Introduction to Research Background

- 1.1 Country Profile in short
- 1.2 Background and Significance
- 1.3 Desired Field(s) or Subject(s) of Research
- 1.4 Research Objectives including the Specific Aims
- 1.5 Approach Methods
- 1.6 Expected Results

Chapter 2 Disaster Management System in Myanmar

- 2.1 Hazard Profile of Myanmar
- 2.2 Recent Distinct Disasters in Myanmar
- 2.3 Legislative and Institutional Arrangements for Disaster Risk Management in Myanmar
 - 2.3.1 National and Sub-National Arrangements for Disaster Management in Myanmar
 - 2.3.2 Disaster Risk Reduction Networks in Myanmar and Private Sector in DRR
 - 2.3.3 Participating on DRR process of Community Organizations
- 2.4 Introduction about Department of Disaster Management
 - 2.4.1 Conducting the Capacity-Building Training for Staff and Communities including the materials
- 2.5 Introduction Myanmar Action Plan on Disaster Risk Reduction (MAPDRR-2017)
 - 2.5.1 Priority Action 1.8 under the Pillar 1 of MAPDRR
 - 2.5.2 Priority Action 4.1 under the Pillar 4 of MAPDRR



ADRC Visiting Researcher 2018 Term B (January – April 2019)

- 2.6 Community Resilience Framework in Myanmar
- 2.7 Case Study in Myanmar concerning with DM plan in Township Level

Chapter 3 Community Based Disaster Risk Management System in Japan

- 3.1 Hazard Profile in Japan
- 3.2 Some Major Natural Disasters Recently Happened in Japan
- 3.3 Disaster Management System of Japan
- 3.4 Disaster Management Plans in Japan
 - 3.4.1 Promoting CDMP system at the National level in Japan
 - 3.4.2 Promoting CDMP system at the Municipals level in Japan
- 3.5 Community Participation on DRR process in Japan
- 3.6 Some Activities which are included in the schedule for ADRC VR and Benefits

Chapter 4 Finding and Conclusion

- 4.1 Finding and Conclusion
 - 4.1.1 Advantages
 - 4.1.2 Challenges

Abbreviations

References



Chapter 1 Introduction to Research Background

1.1 Country Profile in Short

The Republic of the Union of Myanmar is situated in Southeast Asia and is bordered on the north and northeast by China, on the east and southeast by Laos and Thailand, on the south by the Andaman Sea and the Bay of Bengal and on the west by Bangladesh and India. It is located between latitudes 09° 32' N and 28° 31' N and longitudes 92° 10' E and 101° 11' E. The country covers an area of 261,228 square miles ranging 581 miles from east to west and 1,275 miles from north to south. It is a land of hills and valleys and is rimmed in the north, east and west by mountain ranges forming a giant horseshoe. Enclosed within the mountain barriers are the flat lands of Ayeyarwaddy, Chindwin and Sittaung River valleys where most of the country's agricultural land and population are concentrated. Another famous river's name is Thanlwin. Myanmar is made up of 135 national races, of which the main national races are Kachin, Kayah, Kayin, Chin, Bamar, Mon, Rakhine and Shan. Population of the country is estimated at 54.07 million (2014 census) and the population growth rate is 0.89 percent. In Myanmar, there are Seven States and seven Regions which are made up of 75 Districts, 330 Townships, 458 Towns, 3400 Wards, 13599 Village Tracts and 63282 villages. The Capital City is Nay Pyi Taw.

There are three distinct seasons in Myanmar: the cold and dry season, from November to February, with average monthly temperatures of between 20°C and 24°C, the hot- dry season, from March to April, with average monthly temperatures between 30°C and 35°C and the wet season, between May and October, with average temperature between 25°C and 30°C. Annual rainfalls in the delta region is approximately 2,500 millimeters (Yangon 2700 mm), while average annual rainfall in the Dry Zone is less than 1,000 millimeters (Mandalay 840 mm), the coastal regions



ADRC Visiting Researcher 2018 Term B (January – April 2019)

receiving over 5,000 millimeters of rain annually. However, Myanmar has witnessed some extreme events in recent years. For example, the monthly rainfall of July, 2015 measured at the weather station in Hakha was equal to a 1-in-1000-year rainfall. On 14th May 2010, the highest temperature, reaching 47.2°C, was recorded in Myanmar.

figure 1.1. Map of the Republic of the Union of Myanmar





ADRC Visiting Researcher 2018 Term B (January – April 2019)

1.2 Background and Significance

Myanmar has embarked on an ambitious development trajectory and launched the Economic Policy of the Union of Myanmar which envisages a people-centered inclusive and continuous development of the country. The 12-point economic policy prioritized the rapid development of fundamental economic infrastructure such as electricity generation, roads, ports, building environmentally sustainable cities, upgrading public services and utilities, expanding public spaces, and making greater efforts to protect and conserve our cultural heritage. Myanmar's development approach and framework, including its economic policy, calls for resilient development as disaster is intimately connected to development.

Disasters are the challenges for every country to the way of marching the developed one. Also climate change and unequal development plans lead to be high disaster risk. Everyone knew that there is no one who can prevent any disaster but can reduce the bad results. A disaster can occur in anywhere, anytime and unexpected forms. When a disaster occurred, the government and the public in that area are initially facing its effect and the first responders. Hence, implementing the process on Community-Based Disaster Risk Management is included the fundamental role to be carried out as a priority. In Myanmar, 85% of poor lives in the area of village tracts (especially they can be found in the region of Ayeyarwady & dry zone). Similarly, Yangon and Mandalay, the commercial cities of Myanmar, are very populated because of the internally displaced persons. Therefore, to conduct the public awareness concerning with Disaster and to update/ develop CBDRM plans at all levels are very important roles. If the community has the good DM plan for disasters, they can response the disaster well. If so, we can build our society as the resilient community in the future. Then it is not so far to reach our vision "Protect lives, economy, heritage and environment, through an



ADRC Visiting Researcher 2018 Term B (January – April 2019)

inclusive approach towards sustainable development in Myanmar".

1.3 Desired Field(s) or Subject(s) of Research

In Myanmar, according to the existing Disaster Management Law (2013) and Rules (2015), DM plans have been prepared in all states/ regions, administrative zones, districts, townships, wards and village tracts levels. According to the time and circumstances of the country's situations, the existing DM plans are needed to update/develop. Myanmar has the national plan namely "Myanmar Action Plan on Disaster Risk Reduction- MAPDRR (2017)". There are 4 pillars and 32 priority activities to implement during the limited timeframe. Among them, in the priority activity 4.1, firstly, we will implement on updating / developing the DRM plans which are in all regional/state and self-administered zone and 50 most vulnerable townships. In the second year, we will continue implement another 150 vulnerable townships and its ward/village tract. Rest all 150 townships and its village tracts/ wards will be continued in 3rd year. For these reasons, the visiting researcher from Myanmar wants to study the good practices in Japan concerning with CBDRM.

To accomplish this study, the following research activities will be conducted.

- Capacity building of stakeholders on DRM plan development in Japan
- Community participation in DM Plan in Japan
- Relations between government organizations and local community in making the CBDM Plan in Japan
- Field visit and observe community based activity how to conduct mock drills

1.4 Research Objectives including the specific aims

It is very simple why I want to choose the title as the implementations of CBDRM in Japan because it has the good experiences concerning with the disaster management.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

I am very serious to study the activities taken in community for DRM by the Japanese Government. Moreover, I really want to know how to coordinate and cooperate among the related organizations including communities concerning with DRM. The followings are the specific aims to achieve the objectives.

- To integrate CBDRM activities into community based development programmes in my country based on the knowledge and experiences I received there
- To be able to apply the knowledge and experienced acquired from the program in my organization

1.5 Approach methods

Lectures by ADRC staff who are the experts on DRR, visiting some Government agencies and meeting with some professionals on DRR from Kobe, Osaka, Tokyo, Kyoto and Tohoku Universities and the ones from private companies, visiting to the community level, some affected cities, museums, watching the movies about the past disasters occurred in Japan, and participating the memorial events held by communities together with Government societies, town watching activities, school-based DRR activities, going to some organizations to study their functions and operations such as E-Defense, studying some documents published by Government and others, attending the seminars, international symposium forums, workshops, global summit and also QGIS trainings.

1.6 Expected Results

The expectations concerning with the research are the following

- to implement the Priority action (1.8) under the pillar 1 of MAPDRR namely “Nation-wide disaster awareness program with focus on people



ADRC Visiting Researcher 2018 Term B (January – April 2019)

at most risk” as the priority action by closely cooperation with Department of Social Welfare.

- The second one is the Priority action (4.1) under the pillar 4 of MAPDRR, we need to implement “Updating / developing multi-hazard disaster risk management plan of all regions/states, self- administered zones, districts, townships and wards/ village tracts.
- When I come back to my country, I believe that I will be able to more contribute for my Department and I can apply my knowledge and experience studied in Japan.

Chapter 2 Disaster Management System in Myanmar

2.1 Hazard Profile of Myanmar in Short

Myanmar is prone to almost all types of hazards, which include fire, forest fire, earthquake, strong wind/ cyclone, storm surge, tsunami, landslide, floods, drought and industrial/technological hazards. In recent years, the country is also witnessing a spate of localized disasters such as lightning and riverbank erosion. In 2014-2017, lightning led to the loss of 175 lives. During the same period, Myanmar also experienced loss of 261 and 782 lives due to riverbank erosion and strong wind respectively. The 2015 floods caused damages and losses amounting to USD 1.5 billion, while the 2008 Cyclone Nargis led to USD 4.1 billion. Moreover, the existing risks can increase many fold due to climate change and skewed development. Myanmar has witnessed some extreme events in recent years. For example, in the Chin State, during the last seven days of July 2015, the recorded rainfall was 30 percent higher than in any other month over the past 25 years. The monthly rainfall of July measured at the weather station in Hakha was equal to a 1-in-1000-year



ADRC Visiting Researcher 2018 Term B (January – April 2019)

rainfall. In Myanmar, 2,511 disasters affected 515,153 people and property lost cost (967.79 million Kyats) in the last fiscal year (2017-2018).

table 2.1 Hazard Profile of Myanmar

Hazard	Profile
Earthquake and Tsunami	Two main sources: <u>Sagaing</u> fault, and the <u>Sunda</u> subduction mega thrust zone. Four areas are designated as the Destructive Zone: 1) <u>Bago-Phyu</u> , 2) <u>Mandalay-Sagaing Tegaung</u> , 3) <u>Putao-Tanaing</u> , and <u>Kale-Homalin</u> . Although the latter two have major earthquake hazards, their risk-level is low because they are sparsely populated. In coastal areas of Myanmar: <u>Rakhine Coast</u> falls in the Strong Zone with MMI 8, the <u>Ayeyawady Delta</u> and <u>Taninthayi</u> coasts fall in the Moderate Zone with MMI 7.
Fire/Forest fire	Most frequent hazards <u>occurring</u> in Myanmar. In the last ten years (2007-2016), 12,000 cases were recorded and <u>Yangon</u> , <u>Mandalay</u> , <u>Ayeyarwaddy</u> , <u>Sagaing</u> and <u>Bago</u> are the most affected States and Regions.
Drought	Approximately 51 townships spread across <u>Magway</u> , <u>Mandalay</u> and <u>Sagaing</u> (lower) regions are prone to drought.
Landslide	The mountainous regions, especially in the western ranges and some localities in the eastern highland are prone to landslides. The western ranges have experienced different types of landslides and earth movements such as rock falls, rockslides, soil avalanches and mud flows.
Floods	Flood is one of the most frequent hazards in Myanmar. The threat of flooding usually occurs three times per year, in June, July-August late, September and October with the biggest threat in August, as monsoon rains peak around that time. Most of the areas of Myanmar are prone to floods and the central part of <u>Ayeyarwaddy</u> Region is the most affected one.
Cyclone/Storm Surge	Myanmar is highly vulnerable to these hazards, particularly, during the months of April and May, and also during October to November. Cyclones often occur in the middle of the monsoon season, but they usually don't reach their maximum strength. However, in 2015 Cyclone Komen had disruptive effects, causing heavy rain, landslides and flood. In coastal areas, cyclone can cause storm surges. Climate change is likely to worsen the risk of existing cyclone/storm surge.
Industrial/ Technological Hazards	Myanmar has 51 industrial parks (limited information), primarily located in <u>Yangon</u> and <u>Mandalay</u> regions. Most of the companies are small to medium enterprises, and lack disaster risk management and business continuity plans. There is a need for profiling of industrial/technological hazards.



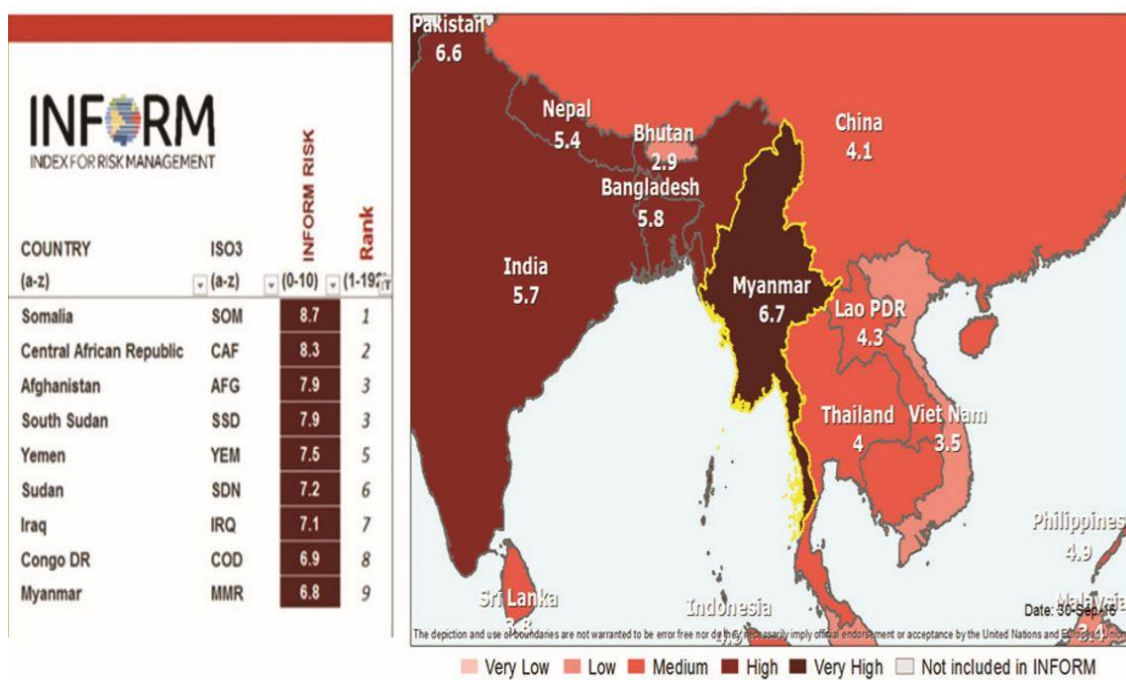
ADRC Visiting Researcher 2018 Term B (January – April 2019)

Figure 2.1. Hazard Calendar of Myanmar

Hazards	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cyclone												
High Temperature												
Low Temperature												
Drought												
Squalls & Thunderstorm												
Flood												
Heavy Rain												
Monsoon Depression					၆	၆	၆	၆	၆			
Hail												

Source- www.moezala.gov.mm

Figure 2.2 Risk Index of Myanmar





ADRC Visiting Researcher 2018 Term B (January – April 2019)

2.2 Recent Distinct Disasters in Myanmar:

Floods and Landslides (July 2015)

Heavy seasonal rains since end June superimposed by storm winds from Cyclone Komen when it made land fall in Bangladesh on 30 July 2015 resulted in flooding in 12 States and Divisions out of 14 in Myanmar. Worst hit areas are in Chin State, Rakhine Sate, Sagaing Region and Magway Region. Death toll has risen to 117 persons as of 31st August. 1,615,000 persons and 399,913 households were directly affected based on government sources. A total of 247 health facilities were damaged of which 195 were sub-health centers in 38 townships of 7 States and Regions. The flooding has inundated more than 1.2 million acres of farmland; damaged 485 schools and 16,741 homes (according to the situational report (SR 4) of WHO). The 2015 floods and landslide caused damages and losses amounting to USD1.5 billion (according to Myanmar Post-Disaster Needs Assessment of Floods and Landslides).



Earthquake in Bagan (August 2016)

A 6.8 – magnitude of earthquake in central Myanmar on 24th August, 2016 killed four people and damaged 389 of ancient structures dotting the plains of Bagan. (source from face book page of Bagan Arch)



ADRC Visiting Researcher 2018 Term B (January – April 2019)



Fire (October 2017)

On 19th October 2019, fire destroyed landmark hotel namely Kandawgyi Palace situated in Yangon.



Landfill Fire in Yangon (April 2018)

On 21st April, 2018, it happened the fire in a massive garbage dump on the edge of Hlaing Thar Yar Township in Yangon. Due to the foul-smelling smoke from the burning trash, many people were injured and sent to the hospitals. It highlights the growing waste problem in Yangon, the commercial city of Myanmar. Fighters took about one



ADRC Visiting Researcher 2018 Term B (January – April 2019)

month to put out it. (on line source)



Dam collapse (August 2018)

On 29th August 2018, a dam collapse in Myanmar's central Bago Region because of the heavy monsoon rains killed 7 people and 77,148 people from 17,958 households evacuated to the 93 camps which were opened in Taungoo, Yadashe and Phyu. (Source is Bago DDM)



2.3 Legislative and Institutional Arrangements for Disaster Risk Management in Myanmar

Myanmar is one of the ASEAN member states and agreed to empower the existing ASEAN mechanisms and actions to improve prevention, preparedness



ADRC Visiting Researcher 2018 Term B (January – April 2019)

and response in a more coordinated manner in line with ASEAN Agreement on Disaster Management and Emergency Response (ADMER). Therefore, the Government takes these actions to set up legislative and institutional arrangements for disaster risk management. The country enacted the Disaster Management Law and Rules in 2013 and 2015 respectively. The Law provides legal basis to set up disaster management bodies based on various roles. The Disaster Management Rules, 2015 detail out provisions of the law towards its implementation.

Nowadays, led by Department of Disaster Management and other related organizations try to review the existing laws and rules. The disaster management actions are being taken by linking with Sendai framework for actions and ASEAN Coordination Centre for Humanitarian Assistance on Disaster Management (AHA-Center) in Jakarta, Indonesia.

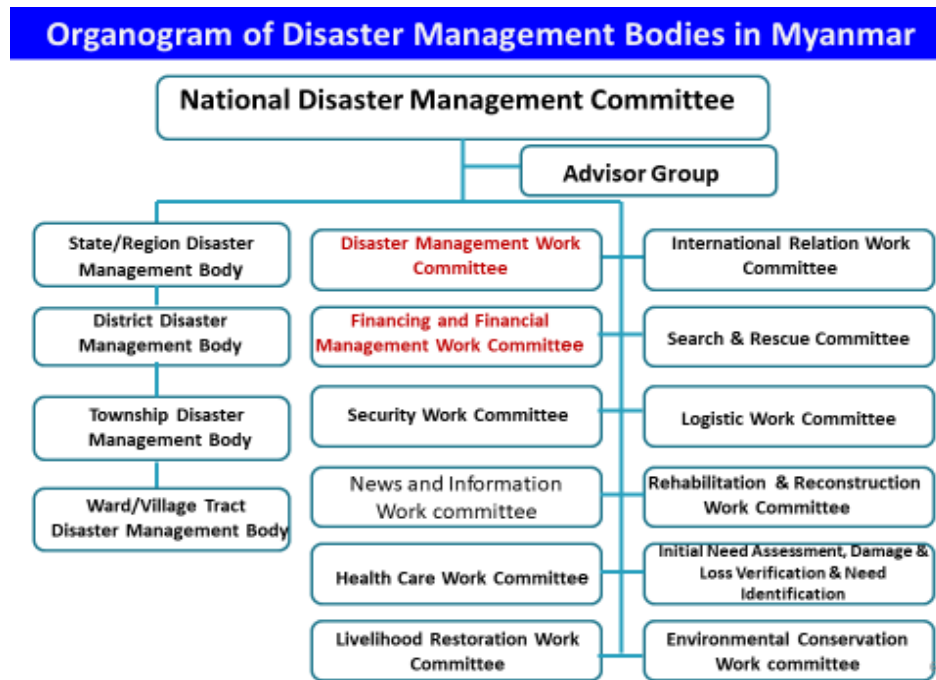
2.3.1 National and Sub-National Arrangements for DRM in Myanmar

The National Disaster Management Committee (NDMC) under the chair of the Vice President (2) is the apex body for Disaster Risk Management (DRM). Under the NDMC, there are 12 work committees related to specific areas of disaster risk management and an advisory committee has been set-up.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

Figure 2.3 Organogram of Disaster Management Bodies in Myanmar



According to provisions of the Disaster Management Law (2013), disaster management bodies are being constituted at the regional/state, self-administered zone, district, township, ward and village tract levels.

Figure 2.4 Sample of Disaster Management Bodies in Village Tract level

DM Bodies in Ward/ Village Tract Level (Sample)		
1	Leader elected by community	Chairman
2	Clerk from Department of Survey	Member
3	Representative from Myanmar Red Cross Society	Member
4	Fire Brigade (Volunteer)	Member
5	Police from Village Tract level	Member
6	Retired person from Military	Member
7	Myanmar maternal and child welfare association	Member
8	Myanmar Women's Affairs Federation	Member
9	Teachers from primary schools	Member
10	Respectable person in these areas	Member
11	Staff from General Administration Department	Secretariat



ADRC Visiting Researcher 2018 Term B (January – April 2019)

2.3.2 Disaster Risk Reduction Networks in Myanmar and Private Sector in DRR

In Myanmar, Disaster Risk Reduction Working Group (DRR Working Group) was established in 2008 to support recovery and reconstruction efforts of Cyclone Nargis. It serves as a platform for information sharing and strengthened coordination among development partners working on disaster risk reduction issues. Working groups have been also set-up at the sub-national level in selected regions and states, including in Mon State, Kayin State and Rakhine State. The groups also coordinate sub-national risk reduction activities. UNDP is the chair of the DRR Working Group at the national level, while the Swiss Development Cooperation (SDC), the Community Development Association and the International Organization for Migration (IOM) head the DRR Working Groups of Chin State, Kayin State and Rakhine State respectively. Besides, Myanmar Humanitarian Country Team (HCT) is a strategic humanitarian coordination and decision-making body that seeks to optimize the collective efforts of the UN, other international and national organizations, non-governmental organizations and the Red Cross Movement. It is convened under the leadership of the Humanitarian Coordinator (RC/HC). The UN Office for the Coordination of Humanitarian Affairs (OCHA) serves as its Secretariat. It oversees the development of sector/cluster response plans and provides oversight and advice to the cluster/sector leads and humanitarian-focused geographic and subsidiary groups. It also leads decision making on inter-agency coordination in regards to assessments, joint monitoring and evaluation missions. There are several international and local non-government organizations, community based organizations, and some professional societies such as Myanmar Engineering Society, Myanmar Geosciences Society and Red Cross system are working on disaster



ADRC Visiting Researcher 2018 Term B (January – April 2019)

risk management, including community level disaster preparedness.

The role of private sector in disaster management especially risk reduction is evolving. It played an important role in the response and recovery efforts of Cyclone Nargis in 2008 and the floods and landslides of 2015. The Union of Myanmar Federation of Chamber of Commerce and Industries (UMFCCI), in partnership with UNDP and UNOCHA, have established the Myanmar Private Sector Disaster Management Network (MPD-Network). The MPD-Network is at a nascent stage but has started to engage at the global, regional and national levels. It has been a member of the Task Force on the MAPDRR 2017 and of the Disaster Management Sub-Sector Coordination Group under Development Assistance Coordination Unit (DACU).

2.3.3 Community Organizations in Myanmar

There are many Civil Society Organizations (CSOs) which are non-government and none-profit ones in Myanmar and they are much strengthened. It is the important sector to improve the role of CSOs because most of the members in which are the regional people and they knew well the real situations of the ground level. Most of them are volunteers and comprised of the ones who are being admired and respected by their communities. To implement the activities on DRR successfully, we cannot neglect the role of CSOs. And we need to apply the strength of them. Besides, the human resources are very limited in the Government Agencies. There are many CSOs all over the country. Among them DDM gives the approval to get the permission of register recognized by the Government is (91). (It is the update list of CR Division under DDM).



ADRC Visiting Researcher
2018 Term B (January – April 2019)

Table 2.2 the approval lists of CSOs given by DDM to get the registration certificate

No.	State/ Region	Total
1	Yangon	46
2	Mandalay	19
3	<u>Sagaing</u>	4
4	<u>Bago</u>	3
5	Magway	5
6	<u>Ayeyarwady</u>	2
7	<u>Naypyitaw</u>	2
8	<u>Kayin</u>	2
9	Chin	1
10	Mon	3
11	<u>Rakhine</u>	1
12	Shan	3
Total		91

With the strengths of communities, DDM has been implementing the awareness campaign concerning with strong wind in some designated areas since 2017, February. The activity is being implemented under the instructions of Director General from DDM. It is aimed at to promote the public awareness on prevention process like that what they need to prepare before the period of strong wind coming. DDM staffs, other NGOs including the leaders of communities go to the ground level, check the real situations of the residents' houses (Not every house, only the houses of the poor) then make the discussions that they can support. First priority is the houses of senior citizens who do not have the dependent ones. DDM takes the role of coordinator between the donors and the public.

2.4 Introduction about Department of Disaster Management

In Myanmar, Department of Disaster Management - DDM (the former name was Relief and Resettlement Department-RRD) under the Ministry of Social Welfare, Relief



ADRC Visiting Researcher 2018 Term B (January – April 2019)

and Resettlement-MSWRR is the focal for Myanmar's Disaster Risk Management and also the focal point for the ASEAN Committee on Disaster Management (ACDM). DDM is responsible to implement the second policy which is "To build a resilient and disaster responsive society and provide better life for disaster affected people through effective disaster management programs" enacted by MSWRR. Therefore, DDM adopted two objectives which are providing emergency assistance for the victims of natural disasters for ensuring immediate relief and conducting preventive measures to reduce the loss of lives and properties due to disasters. Moreover, DDM carries out the following six functions,

- Providing immediate relief to affected people of any kind of natural or man-made disaster.
- Providing aids to persons who are displaced externally or internally either by the storm on the rivers/seas or by any kind of disasters.
- Delivering assistance to people who have to leave their residences due to man-made disasters and to those who have been displaced to secured place from unsafe areas.
- Providing support to people who suffer from starvation as a consequence of damage to crop caused by extreme climate conditions or pests/plant diseases.
- Coordinating with Government Organizations, International Organizations, Civil Society Organizations and well-wishers to undertake rehabilitation and reconstruction interventions to bring about better living conditions of the affected communities.
- Conducting education, training and awareness programmes on disaster prevention and risk reduction.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

2.4.1 Capacity- Building Trainings for Staff and communities including materials for DRR

To implement the effective and efficient DRM Process, all-inclusive pattern is very important. We need to understand the concept “DRM is everyone’s business”. Therefore, DDM tries to get the public interest by conducting the Disaster Education at schools, community workshops, youth volunteer trainings and awareness campaign programs on Disaster Prevention and Risk Reduction among the public areas. For the public awareness program in districts, townships, wards and village tracts levels, DDM coordinated and collaborated together with UN, INGOs, NGOs. DDM can conduct the knowledge sharing about DRR to (486252) people all over the country (from 2013 to 2018).



Table 2. 3 Conducting Training Program Lists for Youth Volunteers (2014-2018)

No.	Types of Trainings	List of Trainings	List of Participants
1	Youth Volunteer Programs (TOT Course)	33	1788
2	Youth Volunteer Programs (Multiplier Course)	29	1484
3	Youth Volunteer Programs (Refresher Course)	186	5821
Total		248	9093



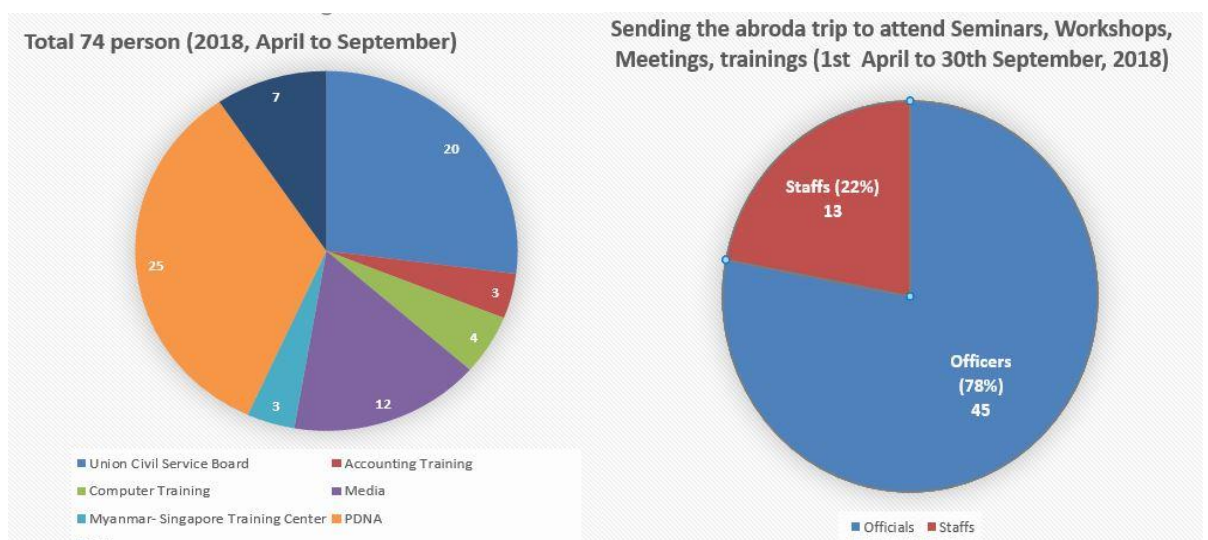
ADRC Visiting Researcher 2018 Term B (January – April 2019)

In the Youth Volunteers trainings, the trainees were provided the things such as T-(1) Shirt, (2) Hat, (3) torch with battery, (4) Shoulder-Bag, (5) Raincoat, (6) Pencils and Pens, (7) Books, (8) File, (9) Hand Speakers with storage battery and (10) Radio plus dry battery. Moreover, DDM provided the trainees daily allowance including travel cost.

At the same time, DDM trains the Staff from NDMOs and LDMOs to improve their capacity-building by doing the following activities -

- Sending them to some foreign countries aimed at getting knowledge and experiences on DRR taken from other countries.
- Opening the technical trainings for Staff only by inviting the experts from internal and external.
- Sending them to Disaster Management Training Centre (DMTC) situated in Hinthada Township, Ayeyarwady Region aimed at getting the basic concepts on DRR and also to be the professionals in their respective fields and other trainings opened in local.

Figure 2.4/ 2,5 Showing the capacity building training for Staff in DMO





ADRC Visiting Researcher 2018 Term B (January – April 2019)

Besides, DDM distributed the pamphlets and vouchers in which eight kinds of disasters are printed. Similarly, DDM is setting up the signboards and wall posters in the public areas to develop the public interest on DRR. At the present time, DDM together with DRR WGs make the analysis the existing pamphlets and wall posters and then edit to more update with the key messages plus pictures.

2.5 Introduction Myanmar Action Plan on Disaster Risk Reduction (MAPDRR 2017):

MAPDRR is a comprehensive and unified action plan for risk reduction and management with prioritized interventions across Myanmar until 2020. In the Action plan, 32 priority actions have been identified under the four pillars namely Risk information and awareness, Risk Governance, Risk mitigation and Preparedness for response, rehabilitation and reconstruction. Each priority action has identified objectives, activities, outputs, duration and lead ministry/ department. Also, other departments and partners to support the lead agency have been identified. Though the priority actions are the national level, the focus will be to build resilience at the community level. Regional/state and self-administered zone governments will be key in reducing and managing risk. The first phase of the MAPDRR identified priority actions for 2020, will support progress against all targets of 2030. Target 5 'Substantially increase access to multi-hazard early warning systems and improve local disaster preparedness in Myanmar' needs to be achieved by 2020; hence the first phase of the action plan will contribute significantly to it. This action plan is primarily towards creating and strengthening systems, creating risk profiles and implementing pilot projects on disaster risk reduction. Therefore, it will be a major milestone for target 2030.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

The following should be achieved by 2020:

- Disaster response, relief, rehabilitation and reconstruction strategy/guidelines/procedures in place.
- Regulatory frameworks (planning, implementation and monitoring guidelines) to include DRR into development (union, regional/state and local development planning) prepared and practiced.
- National, sectorial, regional/state, self-administered zones, township and ward/village tract disaster risk management plan prepared and implemented.
- Disaster management bodies at regional/state, self-administered zone, district, township and ward/village tract fully functional.
- Coordination mechanism for multi-hazard disaster risk assessment is established and operational, at the national level, under the leadership of the government.
- Significant improvement in end-to-end early warning systems (monitoring, forecast, dissemination, evacuation, etc.) across sectors and in all regions/states and self-administered zones.
- System to track DRR investments by government and development partners created and strengthened.
- System/database for recording data on disaster damage and loss is fully operational and annual report on disaster impact and trend prepared and shared. Nowadays, the respective departments must monitor, analyze, document and report the progress of the MAPDRR implementation and coordinate between them.

Nowadays, the designated Departments together with the related agencies are implementing the respective priority activities in which are MAPDRR.



ADRC Visiting Researcher
2018 Term B (January – April 2019)

2.5.1 Priority Action 1.8 under the Pillar 1 of MAPDRR

1.8 Priority Action: Nation-wide disaster awareness programme with focus on people at most risk	
<p>Objective:</p> <ul style="list-style-type: none"> - To create mass awareness on do's and don'ts related to disasters, including lightning, in concerned regions and states of Myanmar - To equip care givers of PWDs on the do's and don'ts related to disasters - To create mass awareness on do's and don'ts related to disasters among communities with focus on people at most risk, including PWDs, their family members and neighbors 	<p>Indicative Activities:</p> <ul style="list-style-type: none"> - Organize tsunami awareness day on 5 November and IDDR on 13 October at the national, regional and state level - In coordination with the DRR Working Group, prepare an event calendar in advance and activities can include: seminar/workshop, Special Meeting of the NDMC, DM bodies at sub-national levels, activities in school, display of do's and don'ts at public places, radio and TV, newspaper, etc. - International Disaster Risk Reduction Day will focus on sub-national level and local hazards, especially lightning in vulnerable regions and states - Youth volunteers of Myanmar should be engaged in undertaking mass awareness activities at the local level - Develop training packages on do's and don'ts related to various disasters specific to type of disability - Conduct training for care givers from government and NGOs to train on usage of the package - Create mass awareness on do's and don'ts related to disasters among communities, with a focus on people at most risk including PWDs, their family and neighbors - Prioritize townships with large populations of PWDs and at who are at high risk
<p>Expected outcome:</p> <ul style="list-style-type: none"> - Increased public awareness on basics of disasters including lightning and tsunami including among PWDs - Standard package on Do's and Don'ts related to disasters for PWDs developed and Care givers trained 	
<p>Duration: One year (Annual event)</p>	<p>Estimated Cost (USD): To be estimated</p>
<p>Lead Department:</p> <ul style="list-style-type: none"> - DSW: Lead for PWD - RRD: Lead for nation-wide awareness 	<p>Other department and partners:</p> <p>GAD, DMH, Ministry of Education, Ministry of Hotel and Tourism, Ministry of Border Affairs, Region/ State governments, MRTV, MoHS, FSD, MES, MEC, Media, Universities, UNV</p>
<p>Need:</p> <ul style="list-style-type: none"> - Need for increased awareness on the do's and don'ts of disasters at sub-national levels, especially at community level - Tsunami and lightning awareness is limited at all levels - A training package on DRR related to disability 	
<p>Challenges:</p> <ul style="list-style-type: none"> - Medium and long term community outreach strategy and youth volunteers - Limited capacity on DRR at the sub-national levels 	



ADRC Visiting Researcher 2018 Term B (January – April 2019)

2.5.2 Priority Action 4.1 under the Pillar 4 of MAPDRR

4.1	Priority Action: Updating/ developing multi-hazard disaster risk management plans of all regions/ states, self-administered zones, districts townships and wards/ village tracts	
	Objective: <ul style="list-style-type: none"> - To update/develop disaster risk management plans of all regions /states, self-administered zones, districts, townships and wards/village tracts in line with the Disaster Management Law, 2013, Disaster Management Rules, 2015 and practice plan 	Indicative Activities: <ul style="list-style-type: none"> - Develop a short guidance notes along with disaster risk management plans to outline for regional/state, self-administered zone township and ward/village tract . It will take into account existing plans, guidelines and DM Law, 2013 and DM, Rules, 2015 - Guidelines on township disaster risk management plans shall be updated before the revision of the Township DRM Plan - Guidance on ward/village tract Disaster Risk Management Plan - Capacity building of stakeholders on DRM plan development - Development/updating of DRM Plans in a phased manner; In the first year, all regional/state and self-administered zone DRM plans and 50 most vulnerable townships and its ward/village tract 150 vulnerable townships and its village tracts/ wards in 2nd year Rest all 150 townships and its village tracts/ wards in 3rd year - DRM Plan will be based on the risk profile of the regions/ state, self-administered zone, district, township and ward/village tract. Vulnerability and effect of climate change will be a key aspect of the DRM Plan. The plan will also include elements of pre-disaster recovery planning - Develop guidelines on how to conduct mock drills - Mock drills to test DRM Plan and review/update plans based on findings of the mock drills
	Expected output: <ul style="list-style-type: none"> - DRM Plan based on risk profile and in accordance with DM Law, 2013 and DM Rules, 2015 is prepared/updated for all regions/states, self-administered zone, district, townships and wards/village tracts 	
	Duration: Four years	Estimated Cost (USD): 235,000
	Lead Department: <ul style="list-style-type: none"> - Regional and State Government - General Administration Department 	Other department and partners: DMH, RRD, ECD, Ministry of Border Affairs, YU, YTU, Universities
	Need: <ul style="list-style-type: none"> - Myanmar has enacted DM Law, 2013 and it covers institutional arrangements and practices and it is important to update/develop DRM Plan at sub-national levels - DRM plans need to be practiced and institutionalized as Myanmar is vulnerable to multiple hazards Challenges: <ul style="list-style-type: none"> - Limited resources and capacity at sub-national levels to develop multi-hazard DRM plans 	

2.6 Community Resilience Framework in Myanmar

The Myanmar National Framework for Community Disaster Resilience seeks to achieve people-centered, inclusive, and sustainable socioeconomic development in



ADRC Visiting Researcher 2018 Term B (January – April 2019)

the face of disasters triggered by natural hazards and climate change. The framework articulates a common understanding, proposes a coherent approach, and identifies potential opportunities for strengthening the resilience of communities in Myanmar. The framework has been started since 2015 and officially launched on 31st March, 2017. The framework was made led by Department of Disaster Management, Ministry of Social Welfare, Relief and Resettlement in its capacity as Chair of National Disaster Management Working Committee of National Disaster Management Committee, in close consultation with different ministries of the Republic of the Union of Myanmar, the Asian Development Bank (ADB), and the members of the Myanmar Disaster Risk Reduction Working Group. To achieve the community disaster resilience outcomes, the stakeholders who are involved in drawing the framework explored those sectors interventions such as strengthening Community Disaster Resilience through rural livelihoods and village infrastructure/ urban development and forestry, financial Inclusion, Social Protection and Disaster Risk Management (strengthening disaster preparedness).

On April 10, 2018, after launching of the framework, the meeting concerning with the implementing of the activities in which was held. Moreover, some project pilots are being carried out in Ayeyarwady Region. ADB supported the financial and technical assistance. The project implementation timeframe is from April, 2017 to May, 2021.





ADRC Visiting Researcher
2018 Term B (January – April 2019)

2.7 Case Study in Myanmar concerning with Disaster Management plan in Township level

According to DM Law (2013) and DM Rules (2015), there is a provision to prepare the multi-hazard Disaster Risk Management Plan in all states/ regions, administrative zones, districts, townships, wards and village tracts levels. In Myanmar, to constitute DM Bodies at the township levels are included as the important role because most of Government Offices can be opened at the township levels. Therefore, the offices at the township levels are the focal to connect up and down. For these reasons, one of our priority activities is to prepare/ update the DM Plans at all levels.

In the report, I would like to show the sample of our DM Plan at the township level namely "the Action Plan on Disaster Risk Management of Labutta Township." In that action plan, DM Bodies and (13) sub bodies have been constituted including the respective roles and responsibilities. In the plan, it was defined the activities which need to take actions before, during and after the disasters (flood and cyclone, fire and tsunami). There was Tsunami Hazard Ranking, Fire hazard Ranking, Storm Surge Hazard Ranking and Cyclone Hazard Ranking for Labutta Townships in that plan. Besides, the lists of cyclone shelters, the names of contact person who are responsible to response the disaster and their phone numbers and the number of drills and capacity building trainings taken in that areas. For Monitoring and Evaluation (M&E) Process, the index such as the number of regular/ emergency meetings between the members of DM Bodies and sub-bodies, the number of trainings and simulation exercises including school – based drills, the participants list who attended the trainings and enjoyed the drills and exercises, the number of action plans taken in the village levels. Also each sub-body has the index to measure the implementation. The stakeholders want to review the action plan every year and revise it based on the experience of conducting drills and exercises which can support



ADRC Visiting Researcher 2018 Term B (January – April 2019)

to explore the weaknesses and challenges. The Action Plan on DRR for Labutta Township was made on March 2014. To appear the action plan, led by DDM and the government officials at the township level coordinated with the NGOs, CSOs made the plan. UN-Habitat supported the technical assistance and European Commission Humanitarian Aid Department and Norwegian Ministry of Foreign Affairs assisted the financial support. Though Labuatta has experienced the major disasters such as Fire (2003), Earthquake and Tsunami (2004), Nargis (2008) and Fire (2016), it can stand up. The people in Labutta named their town as the Phenix. The DM Plan for Labutta Township is the good sample of our country. We have given the name of Labutta as a phoenix.

Nowadays, DDM has carried out the process to update/ develop the existing DM plan aimed at to be the more comprehensive ones. Recently, reviewing workshop on developing DM plans Guidelines at the township levels was held in Naypyitaw. Similarly, other states and regions held the workshops concerning with the DM plans based on the lesson learnt from the recent disasters especially 2015 floods.

Chapter 3 Community Based Disaster Risk Management in Japan

3.1 Hazard Profile in Japan

Japan is located in the Circum-Pacific Mobile Belt where seismic and volcanic activities occur constantly. Due to its natural conditions, Japan is also prone to various natural disasters such as typhoons, torrential rains and heavy snowfalls as well as tsunami and earthquakes. Every year there is a great loss of people's lives and property in Japan due to disasters. Up until the second half of 1950s, numerous large-scale typhoons and earthquakes caused extensive damage and thousands of casualties. Thereafter, with the progress of society's capabilities to respond to



ADRC Visiting Researcher 2018 Term B (January – April 2019)

disasters and mitigate vulnerabilities to disasters by developing disaster management systems, promoting national land conservation, improving weather forecasting technologies, and upgrading disaster information communications systems, disaster damage has shown a declining tendency.

Figure 3.1 showing the results of deaths and missing caused by disasters in Japan

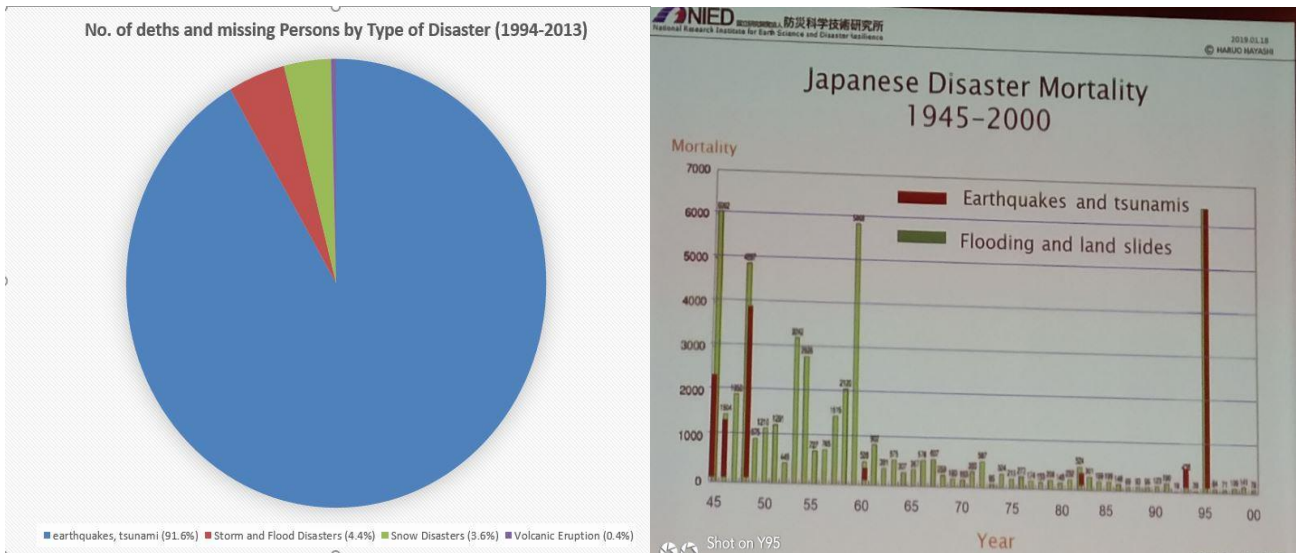


Figure 3.2 Ration of Natural Disasters in Japan to those in the World





ADRC Visiting Researcher 2018 Term B (January – April 2019)

3.2 Some Major Natural Disasters Recently Happened in Japan

Great East Japan Earthquake (March, 2011)

On March 11, 2011, an earthquake of magnitude 9.0 occurred in the Pacific Ocean off the coast of Japan's Tohoku region. After the earthquake, a tsunami of unprecedented force broke over 650 km of coastline, toppling sea walls and other defenses, flooding more than 500 km² land, and washing away entire towns and villages. Due to that disaster, there were 20,000 people dead and missing, 130,000 houses and several damaged 260,000 more. The estimated economic damages are 16.9 trillion (yen).

Northern Kyushu Torrential Rain (July 2017)

During July 5-6, 2017, a linear precipitation system was formed and stayed due to the effect of warm and very humid winds flowing into a stationary seasonal rain front in the vicinity of the Tsushima Straits. This brought continued torrential rain to the same areas, resulting in record heavy rain in northern Kyushu. Due to the torrential rain, water supplies and electricity, as well as roads, railways, agriculture and forestry; all of which are key industries in this region were seriously damaged. More than 2000 people were forced to live in evacuation centers after the disaster. There were 44 people fatalities/ missing and 34 people were injured and 326 houses were completely destroyed, 1110 houses were half-destroyed and the number of houses which were above floor flooding were 222.

Typhoon 21 (October 2017)

Typhoon 21 moved northward from the southern part of Japan during 21-22 October and made landfall near Omaezaki in Shizuoka Prefecture while retaining its supersized and powerful momentum. This brought heavy rain over much of western



ADRC Visiting Researcher 2018 Term B (January – April 2019)

and Eastern Japan and Tohoku Region; due to well-developed rain clouds surrounding the typhoon and the rain front near Honshu. In this event, there were 8 people died/missing, 244 were injured, the number of completely destroyed houses are 7, half – destroyed houses were 434 and 2776 houses were above floor flooding.

West Japan Torrential Rain (July 2018)

In July 2018, Japan has experienced the torrential rain especially in Okayama Prefecture, Hiroshima Prefecture, Ehime Prefecture. We can see the losses and damages list in the following table -

Figure 3.3 Loss and Damage List caused by West Japan Torrential Rain

West Japan Torrential Rain 2018 July –Loss and damage–					
Damage on people (as of 9 October 2018)					
Prefectures	Death	Missing	Seriously injured	Injured	
Okayama	61	3	9	152	
Hiroshima	109	5	49	89	
Ehime	29		29	6	
Other	25		22	68	
Total	224	8	109	315	
Damage on housings (as of 9 October 2018)					
Prefectures	Destroyed	Half destroyed	Partially destroyed	Flooded above floor	Flooded under floor
Okayama	4,822	3,081	1,108	2,921	6,035
Hiroshima	1,085	3,258	1,996	3,234	5,603
Ehime	632	3,212	92	360	2,692
other	156	1,168	511	2,125	7,246
Total	6,695	10,719	3,707	8,640	21,576
Damage on utility					
	Affected households		Recovery		
Electricity	80,000		Recovered by 13 July in habitable area		
Water	263,593		Recovered by 13 August (except destroyed houses)		

Source of photo is from the power point of IRP Forum

3.3 Disaster Management System of Japan

Japan’s legislation for Disaster Management System, including the Disaster Countermeasures Basic Act enacted in 1962, addresses all of the disaster phases of prevention, mitigation and preparedness, emergency response as well as recovery and reconstruction with roles and responsibilities among the national and local governments clearly defined, it is stipulated that the relevant entities of the public and private sectors are to cooperate in implementing various disaster countermeasures.

The Disaster Countermeasures Basic Act has constantly been reviewed and amended



ADRC Visiting Researcher 2018 Term B (January – April 2019)

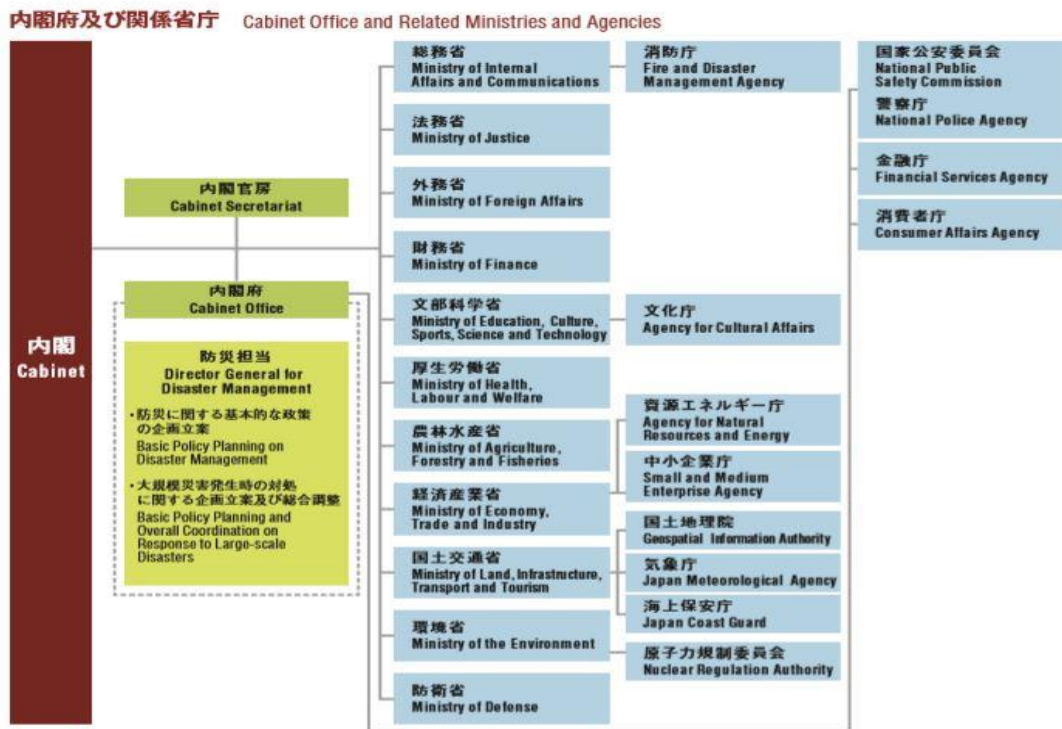
since its first enactment, and with lessons learned from the GEJE (occurred in 2011), provisions were added including enhancement of the measures concerning support activities mutually done by local government in 2012 and the measures for ensuring smooth and safe evacuation of residents and improving protection of effected people in 2013. In 2014, provisions were added for strengthening measures against unattended cars in order to promptly clear them from the roads for emergency vehicles.

Along with a series of reforms of the central government system in 2001, the post of Minister of State for Disaster Management was newly established to integrate and coordinate disaster risk management policies and measures of ministries and agencies. In the Cabinet Office, which is responsible for securing cooperation and collaboration among related government organizations in wide-ranging issues, the Director-General for Disaster Management is mandated to undertake the planning of basic disaster management policies and response to large-scale disasters, as well as conduct overall coordination. To prepare for disasters, the Central Disaster Management Council with the Prime Minister as the Chair and all Cabinet members decides the national government's disaster management policies. Such decisions are carried out by respective ministries and agencies, accordingly. In the event of a large-scale disaster, the Cabinet Office is engaged in collection and dissemination of accurate information, reporting to the Prime Minister, establishment of the emergency activities system including the Government's Disaster Management Headquarters, overall wide area coordination concerning disaster response measures.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

Figure 3.4 The relationship of Ministries and Agencies related to DM in Japan



※この図は防災に関する省庁の関係を概念的に表現したものである。This chart conceptually represents the relationship of ministries and agencies related to disaster management.
※東日本大震災からの復興については、復興庁が担当している。The reconstruction from the Great East Japan Earthquake is led and managed by the Reconstruction Agency.

Figure 3.5 Disaster Management System in Japan





ADRC Visiting Researcher 2018 Term B (January – April 2019)

3.4 Disaster Management Plan in Japan

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

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

Local Disaster Management Plan- This is a plan made by each prefecture and Municipal Disaster Management Council, subject to local circumstances and based on the Basic Disaster Management Plan.

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

3.4.1 Promoting Community Disaster Management Planning System at National Level in Japan

To promote the voluntary activities of residents, the Cabinet Office revised the Basic Act on Disaster Management to commence the Community Disaster Management Planning System in April 2014 for allowing community residents to draft a community disaster management plan and present it in the municipal council for Disaster Management to be reflected in the municipal disaster management plan. The Cabinet Office implemented model projects in 44 districts over three fiscal years through to FY 2016 to promote the community disaster management planning system and encourage residents to make a community disaster management plan. In this three-year model projects, 27 of 44 districts, or roughly 60% drafted their community disaster management plan, of which 16 districts successfully revised the



ADRC Visiting Researcher 2018 Term B (January – April 2019)

municipal DM plan and reflected their drafted plans in the community disaster management plan. 984 CDM plans, as stipulated in the Municipal Disaster Management Plan, were created nationwide as of April 1, 2017. In FY 2017, awareness activities were continued in presentation meetings throughout Japan.

On March 24, 2018, the Cabinet Office held the 2018 Community Disaster Management Plan Forum-Community Disaster Management Keeps on Evolving in Tokyo aimed at to consider the future vision of community disaster management plans based on the characteristics of recent disasters and contemporary trends. The latest cases of community disaster management plan across Japan were presented in the Forum to promote the formulation of community disaster management plans and various techniques available for making such plans including the plans themselves, processes and contents, etc., were introduced.

3.4.2 Promoting Community Disaster Management Plan at the Municipal level

Municipalities have also made good progress with their own initiatives to raise awareness among local residents based on the model projects of the Cabinet Office. For example, Ichihara City of Chiba Prefecture started the Ichihara Disaster Management 100 Members Meeting in February 2018. It comprises 60 residents recommended by voluntary disaster management organizations and randomly selected 2,000 citizens and hold workshops for formulating a community disaster management plan once every month as a place for residents to consider local disaster management. Based on the experience of providing support for northern district of Yahagi (FY 2015) and the western part of Fujikawa (FY 2016), both of which were designated as model districts by the Cabinet Office, Okazaki City of Aichi Prefecture launched independent model projects to create community disaster management plans elsewhere. Consequently, eight districts have already drafted the plan. The City published the implementation Manual reflecting local characteristics based on the Community-



ADRC Visiting Researcher 2018 Term B (January – April 2019)

Disaster Management Plan Guidelines provided by the Cabinet Office in FY 2014 to supply specific instructions such as a method of opening workshops to help residents understand the system. Municipalities hold awareness seminars for residents to raise their disaster risk reduction awareness. To foster disaster management awareness underpinning the community disaster management plan, the Cabinet Office has collaborated with municipalities in this approach to showcase effective ways of raising the interest of residents who may not otherwise be aware. Designated as the demonstrating district in FY2016, Naka Ward of Hamamatsu City in Shizuoka Prefecture launched the Hamamatsu Citizens' Disaster Preparedness Council; comprising subcommittees participated in by randomly selected residents. The Cabinet Office published the Guide to Initiatives to Increase Awareness of Disaster Preparedness among Local Citizens via Random Sampling in March 2017 based on the outcomes of this demonstration project. In FY2017, the Ninomiya Town Disaster Management Workshops were held at Ninomiya in Naka-gun, Kanagawa Prefecture, and as usual, featured randomly selected residents in their 20s to 70s, including 14 first-timers (30 males and females in all) taking part. The demonstrations in the workshop were suitable for local residents who would not normally have many chances to deal with disaster management otherwise, such as hearing evacuees' experiences and playing crossroad games.

As mentioned above, there are various methods to formulate community disaster management plans, which municipalities strive to disseminate to make a suitable plan in collaboration with each other while nurturing reliable relationships with local residents. Disaster mitigation and prevention awareness may be fostered and propagated from one community to another when municipalities provide rear area support for communities, and prefectures and municipalities spread information horizontally in and out of communities through seminars, etc. It is preferable for each



ADRC Visiting Researcher 2018 Term B (January – April 2019)

of these communities to start planning voluntarily; based on the model projects of the Cabinet Office and initiatives taken by local governments. The Cabinet Office will also strive continuously to increase public awareness by disseminating this system of formulating community disaster management plans as best it can.

3.5 Community Participation in Disaster Risk Reduction in Japan

In Japan, community-based organizations (CBOs) have existed for centuries. They are Suibo- dan for flood risk dating from the 17th century, Syobo- dan for fire fighting from the 18th century, and Jisyubo for earthquake disasters from the 1970s. The volunteer fire corps (Syobo-dan) members have regular jobs but, when disaster strikes, they take part in disaster management activities in their own communities, such as fire fighting, issuing warnings, assisting evacuations, conducting search and rescue operations, and operating facilities. There are currently some 890,000 active volunteers across Japan, which is almost six times the number of career fire fighters. The Fire Defense Organization Act and its bylaws stipulate the corps' roles, organizational structures, members' status as part-time government staff, and compensation and allowances. The local government has principal responsibility for the corps, while the central government subsidizes their facilities. The Syobo- dan responded to the GEJE at the risk of their lives. Some 250 members were killed or are missing, including 51 in Rikuzentakata City. Based on lessons learned from the GEJE, the Fire and Disaster Management Agency requested local governments to reinforce the volunteer fire corps in October 2011 with equipment, increased allowances up to the level stipulated by law, and the recruitment of new members.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

Figure 3.6 Number of Voluntary Disaster Management Organizations and their coverage activities

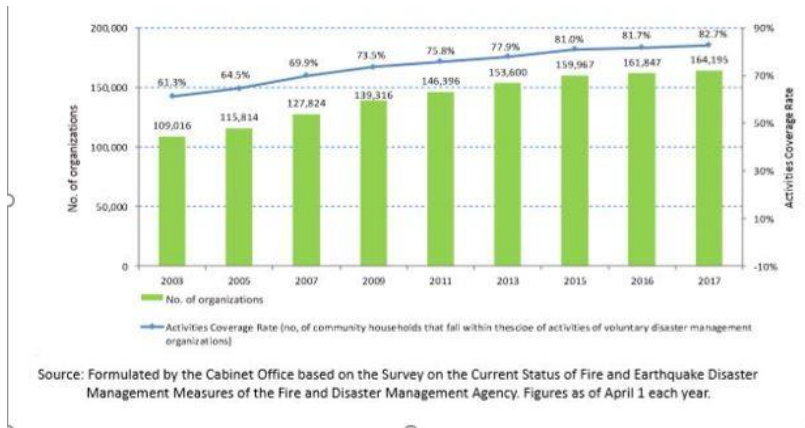


Figure 3.7 Number of Fire Corps Volunteers including Female

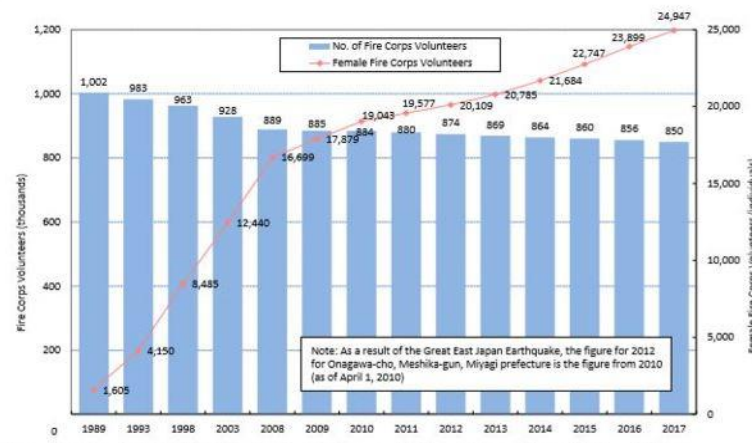
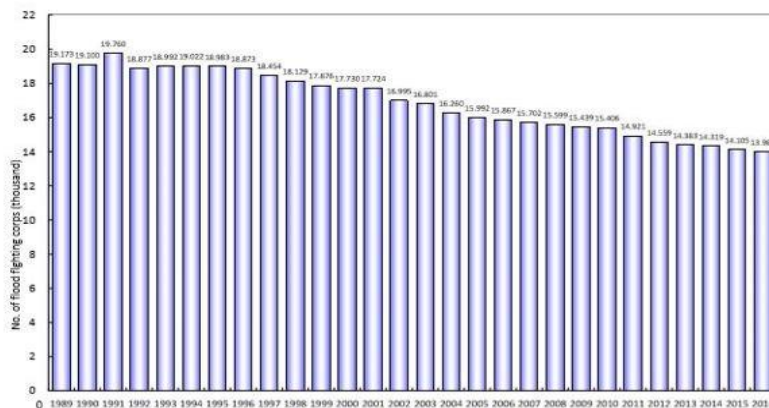


Figure 3.8 Number of Flood Fighting Corps Personnel



In normal times CBOs conduct various emergency drill programs such as on how to use the provided equipment and materials (for ex. Water fire extinguishers, powder



ADRC Visiting Researcher 2018 Term B (January – April 2019)

fire extinguishers), rescue drills, evacuation drills, information transmission drills, flood control drills and etc. In addition, CBOs also conduct welfare activities (such as keeping in touch with and holding lunch gatherings for the elderly people who live alone) as an effort to cover both community welfare activities and community disaster prevention activities. Also they use a number of community festivals as opportunities to engage local schools in disaster awareness and preparedness activities. For example, in the Wakabayashi ward of Sendai City, the local community forged a very strong relationship with the elementary school to educate people in disaster preparedness. At the initiative of the Jichikai, regular drills were conducted in cooperation with the school. Schools in Japan also serve as evacuation sites during emergencies.

Figure 3.9 Ratios of Evacuation Center and various facilities in Japan

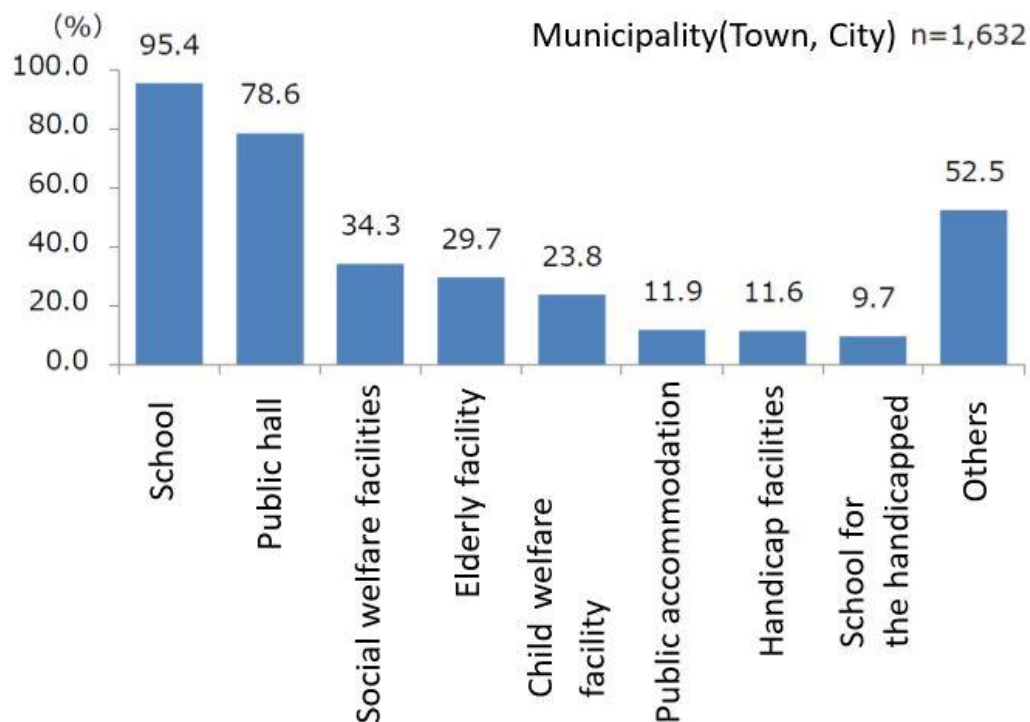
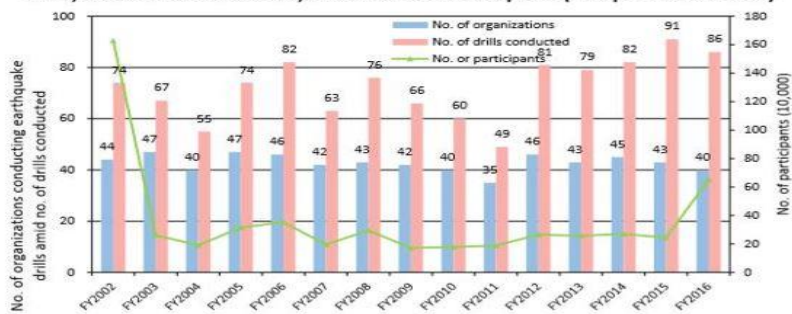


Figure 3.10 Ordinary Utilization of Public Areas on DRR

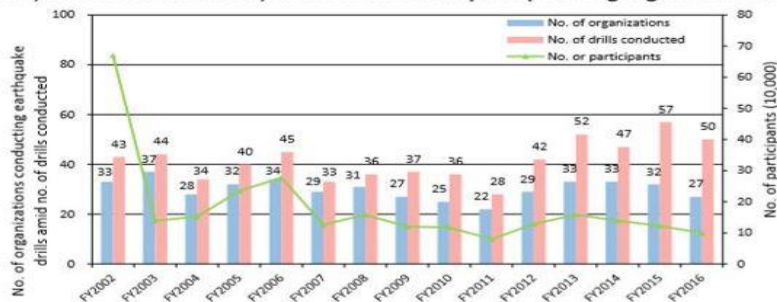


Figure 3.11 No. of conducting Drills together with related organizations on DRR

Trends in the No. of Prefectural Organizations Conducting Earthquake Disaster Management Drills, No. of Drills Conducted, and the No. of Participants (Comprehensive Drills)



Trends in the No. of Prefectural Organizations Conducting Earthquake Disaster Management Drills, No. of Drills Conducted, and the No. of Participants (Including Region-Wide Drills)





ADRC Visiting Researcher 2018 Term B (January – April 2019)

3.6 Some activities in the Schedule for ADRC VR and Benefits

ADRC VRs for 2018 Term B have many chances to study concerning with Disaster Management System in Japan (especially in CBDRM). VRs participated in the conducting community based disaster drills held at the designated elementary schools, shopping mall area, memorial walk and events of the Great Hanshin-Awaji Earthquake. In that activities, the roles of communities especially on DRR process can be seen. Moreover, VRs had the chance to see some community leaders and to attend the Community Bosai Forum. These opportunities could help the VRs to know more about CBOs and their participating on DRR implementation.

Visiting Researchers VRs had the opportunity to join the town watching and hazard mapping activities in the areas of Aotani in Kobe City and Kamakura City. These activities could improve VRs' environmental awareness, the consideration of the risks in the different places and the coordination and collaboration among the VRs and it can highlight the importance of hazard mapping process, the critical role on DRR and for preparing the effective DRM plans.

Travelling to the affected areas such as Sendai, Osaka and Tokyo Cities could understand the effects of mega disaster and how the Government sectors and Private Sectors including residents received the lesson learnt of the past disasters. At the present time, how they try their cities to be the resilient ones.

Sight-seeing visit to Tsunami Storm Surge Station and Ajiwa River Gate Operation Drill in Osaka City, Keage Hydropower Station, Lake Biwa Canal and some famous Shrines in Kyoto, E-Defense could easily understand the importance of investment on DRR.

Attending the International Recovery Forum, International Symposium about Tsunami, 4th Global Summit of Research Institute for Disaster Risk Reduction, Seminars can develop the VRs' thoughts and considered the critical role of Science and Technology



ADRC Visiting Researcher 2018 Term B (January – April 2019)

on DRR and how the research of the academic Institutions could help the Decision Makers to make the right decisions on DRR.

Another interesting activity for VRs was public and private Seminar held in Cabinet Office Head Quarter. There, VRs and others met the representatives from different private companies who introduced their products. Similarly, VRs enjoyed the Earthquake Technology Expo celebrated in Yokohama. There, VRs studied the different kinds of products for Emergency food, the modern facilities, introduction of the building structural design, the early warning system and the tools for fitness furniture.

Lectures by the professionals from Kobe, Toyko, Kyoto, Osaka and Tohoku Universities supported VRs to know more the experts' efforts and point of views. Their experience and knowledge sharing provided VRs in preparing their research papers more comprehensive.

We also had the chance to study the Japanese Lessons.

Chapter 4 Finding and Conclusion

4.1 Finding and Conclusion

4.1.1 Advantages

Both Japan and Myanmar are the most vulnerable to disasters such as floods, typhoons, earthquakes, landslides and tsunamis and also suffer the effects of climate change. Both countries have the legislative and institutional arrangements on DRR. In Japan, the Acts and Laws for DRR/DRM are being reviewed/ amended after the major disasters had occurred based on the lessons learnt from them. The habit is good practice.

The Japanese accept the concept such as "DRM is everyone's business". Therefore,



ADRC Visiting Researcher 2018 Term B (January – April 2019)

they can understand well the importance of self-help and mutual-help. Most of them never forget the damages and losses of past disasters. Therefore, they celebrated the memorial events every year by coordinating with the related government agencies and communities.

Japan has the Museums in which the person who are interested on DRR can touch the image of past disasters and can suffer the messages they want to hand over to their generations. The maintenance of the records (photos, documentary, and some samples of broken physical features) about the past disasters is very systematic.

They knew the importance of Science and technology. Hence, they try to develop the process of their DRM by using the latest technical assistances. Nowadays, many prefectures make the investment in the prevention and preparedness measures.

Professionals from the different Academic Institutes try to develop the DRR education system by doing many research papers. Then they explore the better ways to settle the problems related to disasters. The respectable and admirable fact is that sharing their research to apply on DRR projects.

There are many infrastructures, except the ancient ones in some places, built in accordance with the guidelines of building-codes. In every development process, they consider the risk of disasters. They also have the modern facilities for Search and Rescue Team.

There are many different kinds of hazard maps in which the place of high risk areas, the route to the evacuation places, the information of contact list persons, and the documents are distributed to every house.

The community leaders knew well to prepare community based disaster management plan by themselves and municipals government supported the leaders to make that plan. After preparing the plan, the members of CBOs distributed them all houses in that respective areas.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

They can conduct the drills at night. Most of Cities have the schedule for monthly drills. The CBOs distributed the lists to every house and anybody who are interested to participate can join.

The community leaders hold the monthly meetings and two third of members joined the meetings. They also have the chance to attend the trainings supported by Government.

Some companies send their staff to study the experience of disasters.

In the evacuation center, they place the stockpiling items, chargers, blankets, heaters and some radio communication facilities which can be used in the emergency case.

4.1.2 Challenges

In Japan, the generation gap between the adult and the senior citizens is very high. Most of the members in CBOs are the senior citizens. In BOKOMIs of Kobe City, the youngest member is 65 years old. Though they have many experiences, they cannot totally absorb on DRR activities as they wish. They only take the role of supporting. They have the challenges to invite the young to join in CBOs.

In some parts of regions, the participating of residents in conducting CBDM drills is gradually decreasing. (in case study of GEJE, according to the head of the Jichikai, the participation rate in Kojirahama is low.) The government's recognition of and support to community-based DRM has been key to keeping these efforts alive and well.

Though Japan has the highest and latest technology, most of senior citizens do not want to use them. The system is too high for them to catch up.

There are a little people who has seen the hazard map showing risk areas and evacuation shelters though they had been distributed in the tsunami-stricken areas. (Case study about GEJE, only 20% of residents have seen it)

In the camp management, the involvement of females is still the challenges. CBOs can get the limited information concerning with vulnerable persons supported by



ADRC Visiting Researcher 2018 Term B (January – April 2019)

Government because of the individual privacy.

In some public schools, to hold the community based disaster drill on the weekdays is still difficult to adjust and some Principals don't want to give the permission.

In Japanese Government Sector especially in the officials in the Cabinet Office alternately change every 2 years. Hence, to catch up the concepts on DRR might be the challenges.

All activities in the schedule for VRs are very useful and perfect. But, VRs have the challenges to study all during the three months.



ADRC Visiting Researcher 2018 Term B (January – April 2019)

Abbreviation

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ADB	Asian Development Bank
ADRC	Asian Disaster Reduction Center
ASEAN	Associations of South East Asian Nations
CBDRM	Community-Based Disaster Risk Management
CBOs	Community-Based Organizations
CDMP	Community Disaster Management Plan
CSOs	Civil Society Organizations
DACU	Development Assistance Coordination Unit
DDM	Department of Disaster Management
DM	Disaster Management
DMTC	Disaster Management Training Center
DRR	Disaster Risk Reduction
EOC	Emergency Operation Center
FY	Fiscal Year
GEJE	The Great East Japanese Earthquake
HQ	Head Quarter
IDDR	International Day for Disaster Reduction
LDMO	Local Disaster Management Organizations
MAPDRR	Myanmar Action Plan on Disaster Risk Reduction
MDPA	Myanmar Preparedness Agency



ADRC Visiting Researcher 2018 Term B (January – April 2019)

M&E	Monitoring and Evaluation
MPD-Network	Myanmar Private Sector Disaster Management Network
MSWRR	Ministry of Social Welfare, Relief and Resettlement
NDMC	National Disaster Management Committee
NDMO	National Disaster Management Organization
NGOs	None-Government Organizations
PDNA	Post Disaster Nargis Assessment
QGIS	Geographic Information System
TOT	Training of Trainers
UNDP	United Nations Development Programme
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
VRs	Visiting Researchers
WGs	Working Groups



ADRC Visiting Researcher 2018 Term B (January – April 2019)

References

Myanmar Action Plan on Disaster Risk Reduction – MAPDRR (2017)

Myanmar Community Resilience Framework

www.mofa.gov.mm (Ministry of Foreign Affairs website)

www.dop.gov.mm (Department of Populations website)

www.moezala.gov.mm (Department of Meteorology and Hydrology website)

www.gad.gov.mm (Department of General Administration website)

Myanmar Post-Disaster Needs Assessment of Floods and landslides

Department of Disaster Management Report for 2018

6 Months Reports of DDM

Recovery Handbook for Trainers

Myanmar Disaster Management Law (2013) and DM Rules (2015)

Hazard Profile of Myanmar

Sources from Bago/ Yangon Regional Office of DDM

Township Disaster Management Plan for Labutta situated in Ayeyarwady Region

face book page of Bagan Arch

Disaster Management in Japan

White Paper Disaster Management in Japan 2018

Documents from IRP Forum and Lectures by professionals on DRR

Learning form Mega Disasters Knowledge Notes

Power Points from Osaka City University Lecture