MALAYSIA
COUNTRY PROFILE

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NOVEMBER 2018

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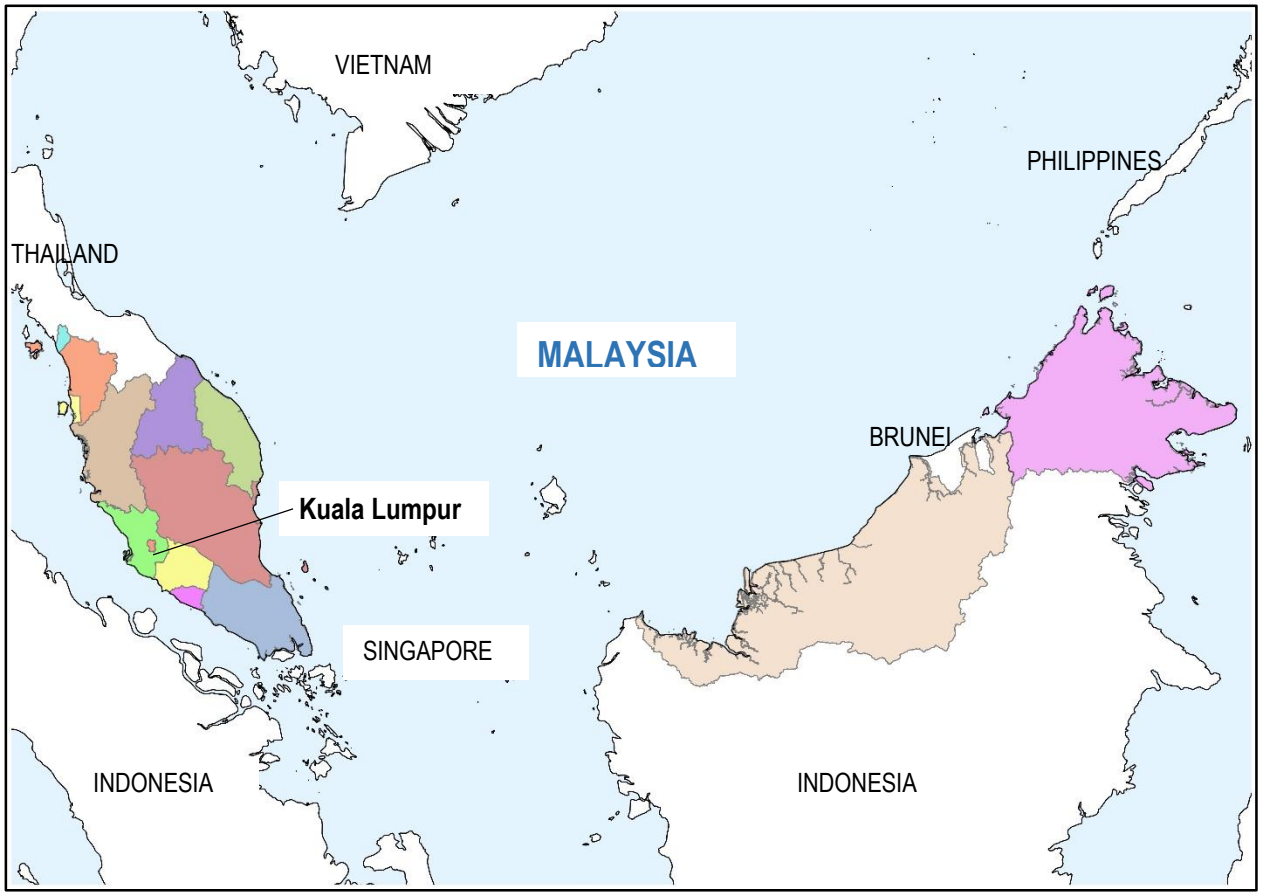

Figure 1: Malaysia Map

1. GENERAL INFORMATION

Malaysia is a federal constitutional monarchy in Southeast Asia. It is located between 2° North and 7° North of Equator in Southeast Asia. The total land area is about 329,847 square kilometers separated by the South China Sea in two regions, Peninsular and Malaysian Borneo. Land borders are shared with Thailand, Indonesia and Brunei, and maritime borders exist with Singapore, Vietnam, and the Philippines (Figure 1). Four-fifths of Peninsular Malaysia is covered by tropical rainforest and swamp. Sabah is split in two (2) by the Crocker Mountains, rising to over 4,100 m (13,450 ft) at Mt. Kinabalu, the highest point in Malaysia. The rainforests cover the greater part of Sarawak and many of the rivers are navigable as one the famous longest river in Malaysia is Rajang River. By year 2017, the total population in Malaysia is about 32.0 million with 28.7 million are citizens and 3.3 million are non-citizens. The Capital City is *Kuala Lumpur*, while *Putrajaya* as Federal Government. Malaysia's climate is a tropical climate with uniform temperature (maximum = 33°C, minimum = 23°C) in high humidity where situated in equatorial doldrums area. It is divided into two (2) seasons which are Southwest Monsoon (May – September), Northeast Monsoon (November – March) and two (2) shorter periods of Inter-monsoon seasons (April and October).

2. NATURAL HAZARDS IN MALAYSIA

2.1 Introduction

Malaysia is geographically located just outside the "Pacific Rim of Fire" and is generally free from severe natural disasters such as earthquake, volcanic eruption and typhoon. Although Malaysia is spared from the threats of severe natural disasters and calamities, Malaysia is nonetheless not spared from other disasters such as flood, man-made disaster, landslide and severe haze. In the past few years, Malaysia has experienced several extreme weather and climatic events, ranging from freak thunderstorms to monsoonal floods and strong earthquake which have caused havoc in the country.

2.2 Recent Major Disasters - The 2014 flood

A monsoonal flood is one of the major disasters in Malaysia, where they are an annual occurrence which varies in terms of severity, place and time of occurrences. Flood is the most significant natural hazard in Malaysia. Yearly, an estimated 29,799 square kilometers are flooded, affecting 4.9 million people, and causing physical damages amounting up to RM 1 billion. Rapid development, unplanned urbanization, climate change and environmental degradation have caused worse and more frequent occurrence of flash floods especially in urban areas.

The 2014 flood was the most significant and largest recorded flood in the history of Kelantan. This flood was called 'Bah Kuning' (yellow-coloured flood) because of its high mud content. The total loss is estimated at MYR 2.9 Billion. A total of 2076 houses were destroyed and 6696 houses were damaged. It was considered to be a "tsunami-like disaster" in which 541,896 victims were displaced while 25 people were killed. This flood has been described as the worst floods in decades. Figure 2 and 3 shows the 2014 flood.

Figure 2: Houses and plantations submerged in the floodwaters.

Figure 3: Tsunami-like disaster damaged the cars.

2.3 The 2015 Ranau Earthquake

Malaysia is also exposed to the earthquakes and tsunami disasters. On 5 June 2015 a powerful earthquake has been occurring on Ranau, Sabah at 7.15am. The earthquake was the strongest to effect Malaysia with a magnitude 6.0 on Richter scale compared to the earthquake in Lahad Datu with magnitude 5.7 on a Richter scale in 1976. Eighteen fatalities were reported due to rock falls, including

nine Singaporeans, six Malaysians, and three miscellaneous nationals. About 137 climbers were stranded on the mountain but were subsequently rescued. Figure 4 and 5 shows damaged at Golf Course Ranau and mosque by the earthquake.

Figure 4: Golf Course Ranau

Figure 5: Ranau Mosque

3. DISASTER MANAGEMENT IN MALAYSIA

3.1 Administrative System

Malaysia practices Parliamentary Democracy with a constitutional monarch, His Majesty the *Yang Pertuan Agong*, as the Supreme Head of the country. The King performs his official duties upon the advice of the Prime Minister and his Cabinet as provided for by the Constitution. His Majesty also holds the position of Islamic Religious Head and as Supreme Commander of the Malaysian Armed Forces.

In keeping with the concept of Parliamentary Democracy which forms the basis of the government administration in Malaysia, the Federal Constitution underlines the separation of governing powers among the Executive, Judicial and Legislative Authorities. The separation of power occurs both at the Federal and State level. Each state has a unicameral legislature known as the 'State Legislative Assembly' and every state is further divided into districts, which are then divided into 'mukim'. In Sabah and Sarawak districts are grouped into 'division'. Malaysian Parliament divided into three (3) components; The *Yang di-Pertuan Agong*, Senate and House of Representatives. The Parliament, the legislative authority for Malaysia formulates laws to the country, makes amendments to existing federal laws, examines the government's policies, approve the government's expenditures and new taxes.

3.2 Establishment of NADMA Malaysia

Malaysia is setting up a new National Disaster Management Agency. The agency under the ambit of Prime Minister's. NADMA has been fully operational since 1 October 2015 through the consolidation of the Disaster Management Division, National Security Council; Post-Flood Recovery Unit, Prime Minister's Department; and the Special Malaysia Disaster Assistance and Rescue Team (SMART). NADMA's tagline of "managing disasters, saving lives" is very apt as it seeks to ensure that the management and response to disaster are more able and efficient in meeting the current demand and challenges thus creating a more resilient nation and its people. Through NADMA, the government envisions a more resilient nation and society through a sustainable disaster risk management mechanism.

NADMA responsibilities as Lead Agency for the National Disaster Management are as follows:

- Is the Lead Agency (focal point) of the National Disaster Management at the National, State and district levels.
- Be the Lead Agency (focal point) of the National Disaster Management at regional and international levels.
- Removing the strategy, direction, action plans, and policy direction in disaster management.

- Ensure the adoption and implementation of disaster management policies and mechanisms run smoothly.
- Monitors and audits in disaster management conducted by government agencies and ordered improvements to enhance the effectiveness of the National Disaster Management.
- Provide secretariat services to the Disaster Management Committees at all levels of disaster management.
- Manage and deploy SMART team for search and rescue operations in and outside the country when necessary.
- Manage KWABBN subject to financial rules and procedures in force from time to time.
- Coordinate disaster management drill operations and search and rescue operations from time to time.
- Monitor and ensure the implementation of measures for Disaster Risk Reduction prevent or reduce the impact of disasters conducted by government agencies.
- Plan, coordinate and monitor the implementation of the strategy with education, training and awareness to the officers and members of government agencies, statutory bodies, private and voluntary organizations and the public in the face and reduce disaster risk.
- To provide advice on the operation and management of disasters.
- Conduct a post -mortem examination was held in the aftermath of disaster handling of a disaster.
- Evaluate, coordinate and lead the humanitarian mission and Disaster Response abroad.
- Evaluate and coordinate humanitarian aid from foreign countries.

3.3 National Policy and Framework

In order to applying to all of the disaster phases of prevention, mitigation and preparedness, emergency response as well as recovery and rehabilitation, to form a comprehensive disaster mitigation framework, the relevant laws and regulations were enacted.

The National Security Council Directive No. 20 (NSC No. 20): *The Policy and Mechanism for National Disaster and Relief Management* is the main guideline for disaster management in Malaysia. The directive prescribes the mechanism on the management of disasters including the responsibilities and functions of related agencies under an integrated emergency management system. This directive also supported by other S.O.P which outlines the mechanism as well as roles & responsibility of various agencies for specific disasters, i.e. flood; open burning, forest fire, haze, industrial disasters and etc.

Relevant laws are as follows below, such as:

1. Government Standard Operating Procedure (SOP)
2. SOP in Handling Flood Disaster (Volume I)
3. SOP in Handling Industrial Disaster (Volume II)
4. SOP in Handling Forest Fire/Open Burning and Haze (Volume III)
5. SOP in Handling Oil, Gas and Petrochemical Disasters
6. SOP in Handling Earthquake Disaster
7. SOP in Handling Tsunami Disaster
8. SOP in Handling Drought Disaster
9. Police Act 1967
10. Fire Services Act 1988
11. Civil Defense Act 1951
12. SOP on Pandemic/ Endemic Preparedness Plans - MOH
13. Malaysian Maritime Enforcement Agency Act 2004
14. Land Conservation Act 1960
15. Environment Quality Act 1974
16. Local Government Act 1976
17. Street, Drainage and Building 1974
18. Occupational Safety and Health Act 1994
19. Uniform Building By-Laws 1984
20. Public Order Manual (POMAN)
21. National Contingency Plan for Oil Spill Combat

3.4 Structure of Disaster Management

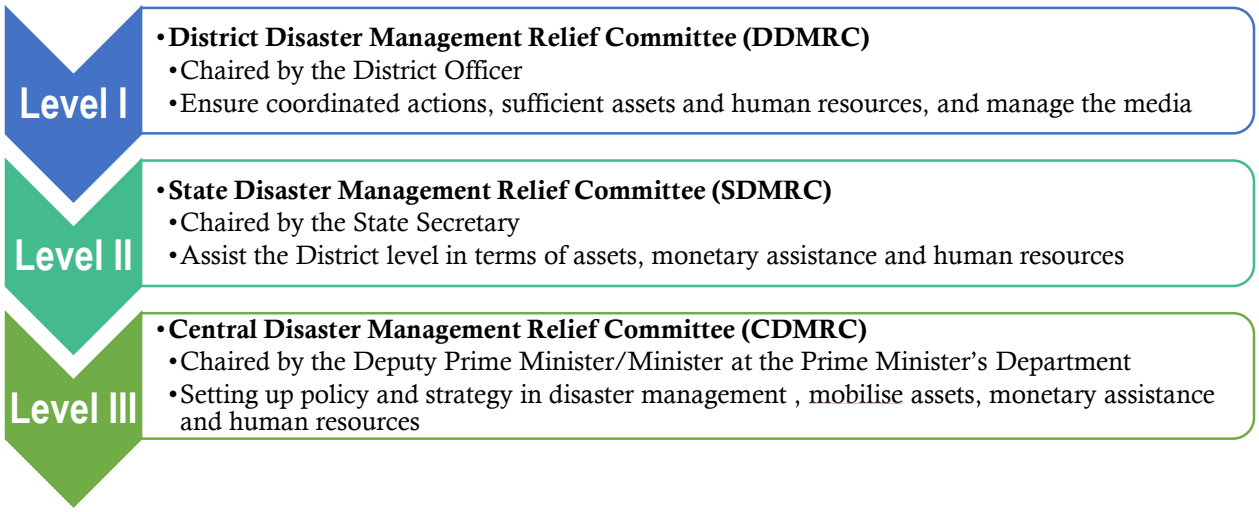

Figure 6: Disaster Management Level

In Malaysia, the management of disaster is handled in three (3) levels as shown in Figure 6:

Level I

Level I is activated when the incident is under control and has no potential to spread. It is not complex and probably results in limited number of loss of lives and properties. This disaster does not really affect the daily activities of the local people. The District Disaster Management and Relief Committee (DDMRC), where the District Officer is the Chairman of the Committee, has the capability of controlling and overcoming the incident through the agencies at the District Level, without or with a limited assistance from outside.

Level II

Level II is activated when a more serious incident covering a wider area or more than two (2) Districts and has the potential of spreading to other areas. There is a possibility that it will result in a greater number of casualties and damage to properties. This incident also destroys the infrastructure and affects the daily activities of the community. It is more complex than Level I Disaster and complicated in terms of search and rescue efforts. The State Disaster Management and Relief Committee (SDMRC), which is chaired by the State Secretary, shall be activated to manage the situation, helping the authority at the District Level in terms of financial, assets and human resources, without or with limited assistance from outside.

Level III

Level III is activated when a more serious incident, more complex and covering a wider area or more that two (2) States. The Central Disaster Management and Relief Committee (CDMRC), which is chaired by the Minister in the Prime Minister's Department, shall be activated to manage the situation, helping the authority at the State Level in terms of financial, assets and human resources, without or with assistance from foreign countries.

The CDMRC is responsible for formulating policies and drafting strategies on national disaster management. It is also responsible for determining that the Policy, Procedures and Directive in Disaster Management are fully adhered to at all levels and stages, as well as to coordinate, supervise and assist, whenever required, in the Level I and Level II Disaster Management Level.

3.5 Preparedness Step

Government agencies and statutory bodies, private sector and voluntary organizations involved in disaster management shall, on its own or collaborate;

- Identify, document and monitor and update the disaster area at risk by types of disaster and their respective jurisdictions;
- Infrastructure Disaster Early Warning System in accordance with their respective jurisdictions;
- Develop and strengthen the capacity in terms of human resources and competence, equipment, transport and communication, technology, finance and so on, so measures taken Responses are coordinated and effective;
- Undertake efforts to increase the understanding and awareness of the disaster in all walks of life;
- Develop expertise and skills in disaster management;
- Emergency Response Plan (ERP) and Business Continuity Plan or Service (BCP), respectively;
- Provide a complete logistics inventory and updated from time to time to accelerate Disaster Response;
- Provide continuous drill to test the Disaster Preparedness for the face, and
- Perform other Preparedness efforts from time to time.

3.6 Disaster Prevention and Mitigation

All government agencies, statutory bodies, private sector and voluntary organizations involved in disaster management shall, on its own or collaborate;

- Prepare and update its policies, action plans and their guidelines for preventing and reducing the risk of disasters;
- To implement development programs for preventing or reducing the risk of disasters;
- Plan and implement abatement actions to reduce disaster risk, including the efforts of research and development in disaster management;
- To enforce the laws and regulations of each relevant and effective governance practices;
- Share information on disaster prevention and abatement, and
- Implementing other prevention and abatement efforts from time to time

3.7 Recovery Program After Disaster

i. Rehabilitation and reconstruction programs should be implemented immediately after a disaster event occurs. Every government agency, statutory, private and voluntary bodies involved, responsible for implementing damage assessment and restoration and reconstruction of public infrastructure under their jurisdiction.

ii. DDMRC and SDMRC are responsible for assessing, planning and recommendations to JPBP on the proposed rehabilitation and development programs to take into account the concept of Disaster Risk Reduction.

iii. CDMRC are responsible for deciding restoration and redevelopment program that will be implemented and set the relevant government agencies or parties for its implementation.

3.8 National Platform and Action Plan on Disaster Risk Reduction (myDRR)

Malaysian National Platform and Action Plan for Disaster Risk Reduction, known as myDRR, is a nationally owned and led multi-stakeholder forum working on disaster risk reduction. They reflect the commitment of its government to implement national and local disaster risk reduction activities while linking up to international efforts.

4. EMERGENCY INFO

Important information for disaster emergencies:

i. Portal Disaster – Disaster Management and Operating Procedures in Malaysia

Alerts: Flood, Haze, Storm, Landslide, etc.

ii. Portal Malaysian Meteorology Department – Alerts: Weather, Earthquake/Tsunami

iii. Portal Department of Irrigation and Drainage – Alerts: Flood

iv. Portal Public Works Department Malaysia – Alerts: Landslide, Flood

v. Portal Department of Environment Malaysia – Alerts: Haze, Air Pollution

5. ADRC COUNTERPART

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REFERENCES:

http://www.nadma.gov.my/

http://portalbencana.nadma.gov.my/portal/

https://www.water.gov.my/jps/resources/Annual%20Report/Laporan_Tahunan_JPS_2016.pdf

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4438086/figure/f7-mjms-22-2-001/

http://www.met.gov.my/

https://www.dosm.gov.my

http://mydrr.org