



MALAYSIA

Disaster Management Reference Handbook

June 2019

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Disclaimer

This report has been prepared in good faith based primarily on information gathered from open-source material available at the date of publication. Most of the information was from United States (U.S.) or other government sources and is thus considered to be in the public domain. Such sources include the Central Intelligence Agency (CIA) Factbook, U.S. Department of State (DoS), and foreign government's web pages. Where possible, a link to the original electronic source is provided in the endnote (reference) section at the end of the document. Other sources include Non-Governmental Organization (NGO) homepages, Relief Web, United Nations Development Program (UNDP) or other United Nations (UN) agency web pages, World Bank, and Asian Development Bank (ADB). While making every attempt to ensure the information is relevant and accurate, Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) does not guarantee or warrant the accuracy, reliability, completeness or currency of the information in this publication. Any necessary updates will be incorporated in a future version.

Welcome - Note from the Director

Although Malaysia is located outside the Ring of Fire and south of major typhoon paths, its population is exposed to natural disasters such as floods, droughts, landslides, haze, and tsunamis. In December 2014, Malaysia faced its worst monsoon flood which affected over half a million people across several states and caused extensive damage to infrastructure. Due to this event and the number of growing climate change concerns, the country has invested in adaptation and mitigation efforts in addition to improving its disaster risk management structure. Additionally, Malaysia's membership in the Association of Southeast Asian Nations (ASEAN) and other strategic partnerships have secured its place as a major regional asset.

This past April, I attended the first Malaysian Humanitarian Assistance and Disaster Response Civil-Military course where CFE-DM provided training alongside NADMA, International Federation of Red Cross and Red Crescent Societies, U.N. World Food Programme, Office of U.S. Foreign Disaster Assistance, and ASEAN Coordinating Centre for Humanitarian Assistance on disaster management. The event took place in Kuala Lumpur, Malaysia from 17-19 April 2019. There, approximately 50 civilian and military disaster response stakeholders were on hand to enhance their knowledge in disaster response and operationalize civil-military coordination at the national, regional and international levels. It was a positive opportunity to share information for a common goal of readiness and preparedness with our partners in the Indo-Pacific Region.

The partnership between Malaysia and the U.S. continues to grow as further evident by the continued collaboration with the Pacific Partnership event which Malaysia hosted this past April, and with the U.S. and Malaysia's co-chairing the ASEAN Defense Minister's Meeting-Plus Experts Working Group on Humanitarian Assistance and Disaster Response (ADMM-Plus EWG on HADR). CFE-DM has participated and supported these events with Malaysia in direct support to U.S. Indo-Pacific Command. Many of these events are highlighted in this Disaster Management Reference Handbook.

This Handbook focuses on Malaysia's disaster management framework and partnerships, and highlights Malaysia's Disaster Risk Reduction (DRR) strategies and plans. This Handbook also provides an overview of the country's government, geography, demographics, social cultural practices, as well as details its history of natural disasters, and the current state of its disaster risk and response management. CFE-DM provides education, training and research about disaster risk management and humanitarian assistance, particularly in international settings, which require coordination with Department of Defense (DoD) and civilian agencies. This guide serves as an initial source of information for individuals preparing for DRR activities or immediate deployment with Malaysian partner responders in a crisis.



Sincerely,

Joseph D. Martin, SES
Director

Information about the Center for Excellence in Disaster Management and Humanitarian Assistance

Overview

The Center for Excellence in Disaster Management & Humanitarian Assistance (CFE-DM) is a United States (U.S.) Department of Defense (DoD) organization that was established by U.S. Congress in 1994. The Center is a direct reporting unit to U.S. Indo-Pacific Command and is located on Ford Island, Joint Base Pearl Harbor-Hickam, Hawaii.

CFE-DM was founded as part of the late Senator Daniel K. Inouye's vision. The Senator had witnessed the effects of Hurricane Iniki that struck the Hawaiian Islands in 1992 and felt the civil-military coordination in the response could have been more effective. He set about to establish CFE-DM to help bridge understanding between civil and military responders, and to provide a DoD platform for building Disaster Management and Humanitarian Assistance (DMHA) awareness and expertise in U.S. forces, and with partner nations in the Asia-Pacific. While maintaining a global mandate, the Asia-Pacific region is our priority of effort and collaboration is the cornerstone of our operational practice.

Mission

CFE-DM increases the readiness of U.S. forces, civilian and military counterparts, and international partners to respond globally to foreign humanitarian assistance and disaster relief operations through Civil-Military coordination, training, information sharing, and regional planning.

Vision

CFE-DM exists to save lives and alleviate human suffering by connecting people, improving coordination, and building capacity.

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Disaster Management Reference Handbook Series Overview

The Disaster Management Reference Handbook Series is intended to provide decision makers, planners, responders and disaster management practitioners with an overview of the disaster management structure, policies, laws, and plans for each country covered in the series. Natural and man-made threats most likely to affect the country are discussed. The handbooks also provide basic country background information, including cultural, demographic, geographic, infrastructure, and other relevant data.

Conditions such as poverty, water and sanitation, vulnerable groups, and other humanitarian issues are included. A basic overview of the health situation in the country and disease surveillance is also covered. The handbooks include information on key national entities involved in disaster management, disaster response and preparation, and the military's role in disaster relief. Information on United Nation agencies, international Non-Governmental Organizations (NGOs), major local NGOs, and key U.S. agencies and programs in the country, are also provided.

The overall aim is to offer a guide that brings together important information about disaster management and response for each country in an effort to provide a basic understanding for the reader. Information in the handbooks are compiled and based primarily on trusted, reliable, publicly available sources. Much of the information used is from open source websites including but not limited to ReliefWeb, PreventionWeb, the Central Intelligence Agency (CIA) Fact Book, the United Nations (UN), The World Bank, the Asian Development Bank (ADB), government sources, NGO websites, various media sources, U.S. Department of State (DOS), and foreign governments' web pages. Where possible, a link to the original electronic source is provided in the endnote (reference) section at the end of the document. Other resources are provided by subject matter experts (SMEs).

Each handbook is a working document and will be updated periodically as new, significant information becomes available. We hope that you find these handbooks informative, relevant, reliable, and useful in understanding disaster management and response for this country. We welcome and appreciate your feedback to improve this document and help fill any gaps to enhance its future utility. Feedback, comments, or questions can be emailed to cfe.dmha.fct@pacom.mil. You may also contact the Center at: (808) 472-0518. Please visit our website (<https://www.cfe-dmha.org>) to view the latest electronic versions available or to request a hard copy of a disaster management reference handbook.

This report has been prepared in good faith based primarily on information gathered from open-source material available at the date of publication. While making every attempt to ensure the information is relevant and accurate, CFE-DM does not guarantee or warrant the accuracy, reliability, completeness or currency of the information in this publication.

Executive Summary

Malaysia is located in Southeast Asia bordering Thailand, Brunei, and Indonesia and consists of 13 states and 3 federal territories. Geographically, it is in a stable region, outside the Ring of Fire and south of major typhoon paths.¹ However, Malaysia is often affected by other natural disasters such as floods, landslides, haze, earthquake and other man-made disasters, as well as some rare cases of droughts and tsunamis. Annually, floods account for the most frequent and significant damage and are responsible for a significant number of human lives lost, disease epidemics, property and crop damage, and other losses.² Malaysia has experienced 51 natural disaster events in the last two decades (1998-August 2018). In that time period, 281 people died, over 3 million people were affected, and disasters caused nearly US\$2 billion (MYR8 billion) in damages.³

Malaysia has a population of over 31.8 million people contributing to rich traditions encompassing the varied cultures making up the country. The demographic context includes ethnicity, population, language, religion, and vulnerable groups.⁴ Malaysia also has a diversified economy, upper middle-income economic status and is expected to achieve a high-income economy by 2024.⁵ Malaysia, a founding member of ASEAN, participates in several ASEAN programs and initiatives including ASEAN ERAT,⁶ ASEAN Safe Schools Initiative,⁷ and to ASEAN's Disaster Emergency Logistics System (DELSA), a repository of relief goods and supplies housed in Malaysia for countries affected by disaster in the region.⁸

Malaysia has several vulnerable groups, including children, the poor, and displaced persons.⁹ The country also faces potential threats to population health and development due to climate change. These impacts can affect food production, water provision, ecosystem disruption, outbreaks of infectious diseases and vector-borne diseases.¹⁰ Therefore, Malaysia has incorporated several strategies and implemented a framework to mitigate these threats with planned economic and civil progress set out in the Eleventh Malaysia Plan 2016-2020. The plan also identifies disaster management resilience against climate change and natural disaster strategies.¹¹

Malaysia faces potential threats to population health and development due to climate change. For example, communities living in coastal regions are at risk of flooding due to sea-level rise. Increased temperatures and changes in precipitation patterns may cause an increase in malaria, cholera and dengue, and heat-stress. In addition, many climate hazards and extreme weather events, such as heat waves, heavy rainfall and droughts, and inland flooding, could become more frequent and more intense due to climate change. Flooding due to climate change could cause more drowning deaths and cause indirect effects. These impacts can affect food production, water provision, ecosystem disruption, infectious disease outbreak and vector-borne diseases.¹²

Malaysia has an INFORM 2019 Natural Hazard and Exposure risk of 3.4/10.¹³ Additionally, Malaysia had the highest percentage of the population exposed to floods among ASEAN member states between July 2012 and January 2019.¹⁴

The country has recently established a new disaster management structure. In 2015, the National Disaster Management Agency (NADMA), in the Office of the Prime Minister, became the lead disaster management agency for regional and international disaster management efforts. The disaster management organization structure continues under three levels: federal, state, and district.¹⁵

Malaysia has an early warning system for earthquake, flood, and tsunami including Short Message Service (SMS) capabilities, and other technologies to alert communities of impending disaster risks.¹⁶ Malaysia has achieved women's improved health status, greater educational attainment, and increased participation in higher paying occupations.¹⁷ Additionally, Malaysia recently established the parliamentary select committee on gender and equality rights, holding its first meeting in spring 2019 with intentions to improve the WPS agenda.¹⁸

With the ratification of the Sendai Framework for Disaster Risk Reduction (2012-2030), Malaysia continues to place green emphasis to reduce disaster risks in the Mid-Term Review of the Eleventh Malaysia Plan (2016-2020). Therefore, disaster risk management, including risk reduction efforts, will be intensified by enhancing the integration of DRR initiatives, strengthening disaster preparedness and increasing capacity in disaster response.¹⁹



MALAYSIA

Country Overview

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Country Overview

History

Malaysia has been occupied by several different rulers in its history. The region was first inhabited by aboriginal people, or Orang Asli, with 18 official Orang Asli tribes recognized today. In the 2nd century BCE, settlers arrived from south China. Indian traders began settling in Kedah and along the west coast of the peninsula near the beginning of the 1st century CE. During this time period, Hinduism and Buddhism were introduced, Buddhist states developed in the east, and the Indian kingdom of Kuanan was founded.

From 1330–50 the Javanese people (both Malaysian and Indonesian) controlled the peninsula. In the 15th century, its rulers converted to Islam and traded with Muslim merchants, and Islam replaced Buddhism across present-day Malaysia. The Portuguese took control of Malacca (part of present day Malaysia) in 1511. Approximately a century later, the Portuguese were driven out by the Dutch in alliance with the Sultan of Johor, during which time the Malay kingdom was ruled by Johor.

In 1786, the Sultan of Kedah granted the island of Penang to the British East India Company for use as a trading post. Less than a decade later, the British took Malacca from the Dutch. The British introduced rubber farming towards the end of the 19th century. During this time, immigrants from southern China and southern India came to work in tin mines and on the plantations, facilitating the peninsula's transition from a trading outpost to a commodity producer. Between 1873 and 1930, the British colonial administrators took control of the foreign affairs of the nine Malay Sultanates on the peninsula with a series of treaties. In 1896 the Federated Malay States (Selangor, Negeri Sembilan, Perak and Pahang) were established.

In 1915, Indian sepoy's rebelled against colonial rule and came close to taking control of Singapore. In 1931, the Malayan Communist Party (MCP), or Parti Komunis Malaya (PKM) was established. It drew most of its support from the Chinese community and had links with developing communism. Anti-colonial nationalism began among the Malay community soon after, with the formation of the Union of Young Malays. From 1941 to 1945 the Japanese

occupied the country and resistance, mainly from the Chinese, was led by MCP guerrillas.

After the war, British rule was reintroduced, but the MCP were resistant. The United Malays' National Organisation (UMNO, the principal Malay party) was formed in 1946 and Malay nationalists campaigned for independence. In 1948, the Federation of Malaya, comprised of 11 peninsular states, was established in 1948. The UK suppressed a communist-led insurrection; however, guerrilla warfare continued in the north of the Malay peninsula and Borneo. Malaysia's first election was held in 1955. The Alliance Party (Parti Perikatan), a coalition of three communal based parties, UMNO representing the Malays; MCA representing the Chinese, and MIC representing the Indian community, won the parliamentary seats and became a dominant political force.

Early in 1956, the governments of the Federation of Malaya, the UK, and the Heads of the Malay States agreed that the Federation should achieve independence. In August 1957, the Federation of Malaya became an independent nation and joined the Commonwealth. Penang and Malacca became states of the Federation. The Malaysia Agreement, under which North Borneo, Sarawak and Singapore (but not Brunei) would become states in the new Federation of Malaysia, was signed in 1963. The Federation of Malaysia came into being in 1963 and Singapore left the Federation and became an independent state in 1965, by mutual agreement.²⁰

Culture

Malaysia has great cultural diversity with its varied ethnic makeup of Malays, Chinese, Indians, and indigenous tribes, as well as significant influences by Persian, British, and Arabic cultures. The different ethnic communities in the country have their unique rituals and customs. Malay weddings are associated with large banquets and involve eating rice prepared in oil, while Indian weddings are elaborate affairs that continue over several days. Marriage customs in Malaysia also vary. All religious communities have no restrictions on marriage with the exception of Muslims. Malaysian Muslims who marry non-Muslims risk government sanctions; however, if their non-Muslim partner converts to Islam, there is no risk of government sanctions.²¹

Malaysia's multi-ethnic makeup also influences the country's cuisine. The cuisine

of the country varies regionally. Indian, Thai, Sumatran, Malay, Chinese, Javanese and other cuisines have all helped shape the Malaysian dishes. Rice, chili peppers and a shrimp paste called belacan are essential ingredients in every Malaysian kitchen. Coconut, soy sauce, tofu, and lemongrass are also important ingredients in Malaysian cuisine. A variety of meats, including beef, poultry, and mutton, are consumed in the country. Malaysian Muslims abstain from consuming meats that are not slaughtered in accordance with Islamic guidance as well as any pork. However, a large section of the Chinese community living in Malaysia eat pork. Fish and seafood, as well as a variety of fruits and vegetables are prominent in the Malaysian diet.²²

In addition to cuisine, Malaysia has a rich heritage of arts and craft. Long traditions include weaving, carving, and silversmithing. Common Malaysian artwork includes handwoven baskets, woven batik, songket (luxurious textiles), kris (a scalloped edged knife), wooden masks, and betel nut sets. Earthenware has developed in areas such as Perak.²³ Photo 1 is an example of carry baskets from Sarawak, one of Malaysia's states along the island's northwest coast.²⁴

Malaysia has several celebrations and festivals annually. These include Thaipusam, Tadau Kaamatan Harvest Festival, Wesak Day, Chinese New Year, Hari Raya Aidil Fitri (Eid), Sarawak Gawai Festival, among many others.²⁵ The Gawai Harvest Festival takes place in June and marks the end of the harvest for the Iban, Orang Ulu, Bidayuh and some other ethnic groups. Gawai Day has become a symbol of unity, aspiration and

hope for the Dayak community and is celebrated by giving thanks for life, a bountiful harvest, and marking the preparation for a new farming season. The whole community participates in the celebrations, which involve a lot of rituals, singing, dancing and feasts.²⁶ Photo 2 is a picture from the Gawai Harvest Festival in Malaysia.²⁷

Demographics

The demographic context covered in this section includes ethnicity, population, language, religion, and vulnerable groups in Malaysia.

Ethnic Makeup

Malaysia has a multiethnic population consisting of three main ethnic groups being Malay, Chinese, and Indian. Ethnic groups in Malaysia include Bumiputera 62% (Malays and indigenous peoples, including Orang Asli, Dayak, Anak Negeri), Chinese (20.6%), Indian (5.7%), other (0.8%), and non-citizens (10.3%).²⁸

Key Population Centers

Malaysia has a population of over 31.8 million people across Peninsular Malaysia (Semenanjung Malaysia), and East Malaysia (Malaysia Timur) on the island of Borneo, as seen in Figure 1.²⁹ The population growth rate of the country is 1.34%. The Greater Kuala Lumpur region has a population of 7.6 million. Urban areas Johor Bahru, located to the south of Kuala Lumpur, has 983,000 residents, and Ipoh, located north of Kuala Lumpur, has 786,000 residents.³⁰



Photo 1: Malaysian Handwoven Basket



Photo 2: Gawai Harvest Cultural Festival, Malaysia



Figure 1: Map of Malaysia

Language

Malaysia's official language is Bahasa Melayu. English, Chinese (Cantonese, Mandarin, Hokkien, Hakka, Hainan, Foochow), Tamil, Telugu, Malayalam, Panjabi, and Thai are also spoken. Malaysia has 134 living languages, including 112 indigenous languages, and 22 non-indigenous languages. In East Malaysia, there are several indigenous languages with Iban and Kadazan being the most widely spoken.³¹

Religion

Islam is the official religion of Malaysia with 61.3% of the population practicing it. Other religions practiced by the population include Buddhism (19.8%), Christianity (9.2%), Hinduism (6.3%), and others.³²

Vulnerable Groups

According to the World Health Organization (WHO), vulnerability is "the degree to which a population, individual or organization is unable to anticipate, cope with, resist and recover from the impacts of disasters."³³ Malaysia's vulnerable groups include children, the poor, internally displaced persons, refugees, and asylum-seekers.

The Poor

Income inequality in Malaysia remains high relative to other East Asian countries. However, the government has removed broad-based subsidies, and has gradually moved toward

more targeted measures to support the poor and vulnerable, including in the form of cash transfers to low-income households.³⁴ Malaysia has achieved positive human development outcomes over time. Since the implementation of Malaysia's New Economic Policy (NEP), poverty has dramatically declined. Incidence of poverty in Malaysia remains at 0.4% since 2016.³⁵ Although Malaysia has come close to ending extreme poverty, some challenges remain. There are socioeconomic inequalities among the three major ethnic groups in Malaysia. There are pockets of extreme rural poverty, especially among the indigenous communities of Sabah and Sarawak.³⁶ Malaysia is working to improve these numbers with the aid of their developmental plans.³⁷

Children

While Malaysia has improved the standard of living of its citizens, there are emerging areas of concern that require urgent attention regarding the malnutrition of children. Some children are suffering from undernourishment, while their peers are obese or overweight. Unfortunately, stunting is also rising in Malaysia, even when it is on the decline globally. In addition, obesity in children in Malaysia is among the highest in the region.³⁸ There are also 43,710 children who are refugees or asylum-seekers registered with United Nations High Commissioner for Refugees (UNHCR) in Malaysia. More information on refugees and asylum-seekers is discussed below.³⁹

Displaced Persons, Refugees, Asylum-Seekers

As of the end of April 2019, there are 170,460 refugees and asylum-seekers registered with UNHCR in Malaysia. Some 147,590 are from Myanmar, comprising 90,200 Rohingyas, 24,720 Chins, 9,750 Myanmar Muslims, 4,000 Rakhines & Arakanese, and other ethnicities from Myanmar.⁴⁰ Since 1990, Rohingya refugees migrated to Malaysia in order to seek protection. Life for refugees and asylum seekers in Malaysia can be difficult. Refugees are unable to work legally in Malaysia and their children are not allowed to study. It can also be difficult to seek medical treatment in a government hospital or expensive private clinic. The Rohingya Society in Malaysia (RSM) has opened a school for Rohingya children, and UNHCR works closely with partner organizations who implement health programs as a result.⁴¹

There are approximately 22,870 refugees and asylum-seekers from other countries, including some 6,150 Pakistanis, 3,350 Yemenis, 3,090 Somalis, 3,065 Syrians, 1,970 Afghans, 1,720 Sri Lankans, 1,450 Iraqis, 780 Palestinians, and others.⁴² Many have been forced to flee their countries due to war and human rights abuses.⁴³

According to the U.S. Department of State's 2017 Trafficking in Persons Report, foreign workers constitute more than 20% of the Malaysian workforce and typically migrate voluntarily and often illegally to Malaysia from Bangladesh, India, Nepal, Burma, Indonesia, the Philippines, and other Southeast Asian countries.⁴⁴

Economics

Malaysia has a diversified economy and has an upper middle-income economy status defined as GNI per capita between \$3,956 and \$12,235 in 2018.⁴⁵ Since the country's independence in 1957, Malaysia has transitioned from a predominantly agriculture and commodity-based economy, to a manufacturing and services one. Malaysia has become a leading exporter of electrical appliances and parts. Malaysia is open to trade with many countries; it has a trade to GDP ratio averaging over 130% since 2010, and 40% of jobs in Malaysia are linked to export activities. After the Asian financial crisis of 1997-1998, Malaysia's economy has increased significantly. It has also averaged growth of 5.4% since 2010. Malaysia is expected to achieve high-income economy status by 2024.⁴⁶

While significant, Malaysia's productivity

growth over the last two decades has been below several global and regional comparators, according to the World Bank. Ongoing reform efforts are vital to support and sustain Malaysia's development path. Reform effort categories include further advances in education, health and nutrition, and social protection outcomes.⁴⁷

Both per capita income and the average household income have improved as a result of the numerous reforms that were put in place by the government to improve quality of life of the people. Key reforms include the Government Transformation Programme and the Economic Transformation Programme. These are both underpinned by the Tenth Malaysia Plan. Currently, Malaysia is in its Eleventh Malaysia Plan, 2016-2020. The development of the Eleventh Plan was guided by the Malaysian National Development Strategy (MyNDS). In addition, Social Safety Net (SSN) initiatives were implemented to address vulnerability issues and protect the bottom 40% of income households from economic shocks. During the Tenth Malaysia Plan, 2011-2015, many achievements were made to elevate the quality of rural households, as seen in Figure 2.⁴⁸

Government

Malaysia is a federal constitutional monarchy comprised of 13 states and the federal territories of Kuala Lumpur, Labuan, and Putrajaya. All 13 states have their own constitutions and legislative and executive bodies. Malaysia adopted its constitution in 1957. Nine states have hereditary rulers or sultans. There are appointed governors in Melaka, Penang, Sabah, and Sarawak. The federal government retains power over major issues, and each state legislature has the power to make laws regarding any matters not covered centrally.⁴⁹

Malaysia's head of state is elected by the nine hereditary rulers of the Malay states from among their number for a term of five years. This position also holds the position of commander-in-chief of the armed forces. The executive power is retained by the prime minister and the cabinet. The prime minister is appointed by the King and must be a member of the lower house of the parliament. The prime minister presides over the cabinet of ministers, which is chosen from among members of both houses of parliament. The federal government has authority over external affairs, defense, internal security, justice (except civil law cases dealt with under sharia



Elevating the quality of life of rural households

Programme	Achievements
Providing holistic support programmes for micro-enterprises	7,801 participants
Providing business ownership opportunity for capable entrepreneurs	Income of 225,867 participants increased by more than RM2,000 per month
Linking rural talent to employers in nearby clusters and cities	701 participants attained skills training to match job opportunities
Increasing income sustainability in the agriculture sector through the concept of agropolitan and contract farming	3,486 participants income increased by RM1,200 per month
Improving productivity in rural agriculture and agro-based industries	38,663 participants had additional income at least RM300
Increasing land productivity and yield through land amalgamation	<ul style="list-style-type: none"> Rubber at 1,276.45 kg/ha (2012) Palm oil at 15.54 mt/ha (2012)



Enhancing the economic participation of urban households

Programme	Achievements
Establishing industry-specific skills centres based on targeted geographical areas	3,100 participants attended skills training
Expanding micro-enterprise support programmes	8,580 participants attained entrepreneurship training
Extending the incubator concept to increase entrepreneurship and employment opportunities	1,726 GIATMARA incubators developed



Raising household income through information and communications technology (ICT)

Programme	Achievements
eRezeki micro-sourcing to generate income	39,518 participants with total revenue of RM6.87 million

Figure 2: Economic Achievements Improving Quality of Life in Rural Malaysian Households

[Islamic law]), federal citizenship, finance, commerce, industry, communications, and transportation.⁵⁰ Table 1 represents the Political Leadership in Malaysia to include the Head of State, Prime Minister, and others.⁵¹

Environment

Geography

Malaysia is comprised of Peninsular Malaysia (Semenanjung Malaysia), and East Malaysia (Malaysia Timur).⁵² Malaysia has a coastal terrain with plains, hills, and mountains.⁵³ Peninsular Malaysia extends to the south and southwest from Myanmar and Thailand. It is about 500 miles (800 km) long and about 200 miles (320 km) wide. Approximately half of Peninsular Malaysia is covered by granite and other igneous rocks. One-third is covered by stratified rocks older than the granite, and the remainder is covered by alluvium. It also has mountain ranges with the most prominent being the Main Range.⁵⁴

East Malaysia is an elongated strip of land approximately 700 miles (1,125 km) long and approximately 170 miles (275 km) wide on the island of Borneo. The coastline is approximately 1,400 miles (2,250 km). East Malaysia has three topographic features which include a flat coastal plain, hill-and valley region, and mountainous region.⁵⁵

Malaysia Maritime Zone (MMZ) covers an area of 516,851 sq km. Within the MMZ there are 561 islands, 60% of Malaysia population lives along the coast. Malaysia Maritime Search and

Rescue Region (MSRR) covers an area of 894,766 sq km (Peninsular Malaysia, 380,329 sq km, Sabah and Sarawak, 894,766 sq km).⁵⁶

Borders

Thailand borders north of Peninsular Malaysia, Singapore to the south, and Indonesia borders West and East Malaysia.⁵⁷ There are security concerns with Malaysia's maritime borders. This is mainly due to sovereignty rights in the South China Sea, the protection of assets within its exclusive economic zone (EEZ), and transnational crimes. Malaysia's two coasts create differing maritime priorities and threats.⁵⁸

Climate

Various regions of Malaysia experience different climate characteristics that are influenced by the summer and winter monsoons, also called southwest and northeast monsoons. These monsoon seasons and their transition periods, the inter-monsoon seasons, account for the various dry and rainy seasons. There is a flood season, flash flood season, and dry and hazy season.⁵⁹

The annual and monthly rainfall varies greatly in Malaysia and at times can be very extreme with times of little to no rainfall to heavy torrential rainfall depending on the season. This varied weather poses a great challenge to sustainable water storage and supply management, because water supply relies on direct rainwater and rainwater stored in dams.⁶⁰

Title	Name	Appointed Date
Supreme Head of State (Yang di-Pertuan Agong); Sultan of Pahang	Abdullah Sultan Ahmad Shah	31 Jan 2019
Deputy Head of State; Sultan of Perak	Nazrin Muizzuddin Shah	14 Oct 2016
Prime Minister	Mahathir bin Mohamad	10 May 2018
Deputy Prime Minister; Minister of Women, Family and Community Development	Wan Azizah binti Wan Ismail	21 May 2018
Minister of Finance	Lim Guan Eng	21 May 2018
Minister of Foreign Affairs	Saifuddin Abdullah	2 Jul 2018
Minister of Defence	Mohamad bin Sabu	21 May 2018
Minister of Economic Affairs	Mohamed Azmin bin Ali	21 May 2018
Minister in the Office of the Prime Minister, responsible for Law	Liew Vui Keong	2 Jul 2018
Minister of Home Affairs	Muhyiddin bin Haji Mohamad Yassin	21 May 2018
Minister of Communications and Multimedia	Gobind Singh Deo	21 May 2018
Minister of Transportation	Anthony Loke Siew Fook	21 May 2018
Minister of Water, Land and Natural Resources	Xavier Jayakumar son of Arulanandamy	2 Jul 2018
Minister of Energy, Technology, Science, Climate Change and Environment	Yeo Bee Yin	2 Jul 2018
Minister of Health	Dzulkefly bin Ahmad	21 May 2018
Minister of International Trade and Industry	Ignatius Dorell Leiking	2 Jul 2018
Minister of Education	Maszlee Malik	21 May 2018
Minister of Domestic Trade, Co-operatives and Consumerism	Saifuddin Nasution bin Ismail	2 Jul 2018
Minister of Agriculture and Agro-based Industry	Salahuddin bin Haji Ayub	21 May 2018
Minister of Primary Industries	Teresa Kok Suh Sim	2 Jul 2018
Minister for Entrepreneurship Development	Redzuan bin Mohamad Yusof	2 Jul 2018

Table 1: Political Leadership in Malaysia

Climate Change

Malaysia faces potential threats to population health and development due to climate change. For example, communities living in coastal regions are at risk of flooding due to sea-level rise. Increased temperatures and changes in precipitation patterns may cause an increase in malaria, cholera and dengue, and heat-stress. In addition, many climate hazards and extreme weather events, such as heat waves, heavy rainfall and droughts, and inland flooding, could become more frequent and more intense due to climate change. Flooding due to climate change could cause more drowning deaths and cause indirect effects. These impacts can affect food production, water provision, ecosystem disruption, infectious

disease outbreak and vector-borne diseases.⁶¹

Table 2 outlines the status of development and implementation of climate resilient measures, plans, or strategies for health adaptation and mitigation of climate change in Malaysia. A checkmark represents that the country has implemented measures, while the X shows that there are no implemented measures.⁶² Malaysia has adopted a National Policy on Climate Change and has a number of policies and plans which are responsive to climate change, such as flood mitigation plans and fire suppression plans.⁶³ Malaysia commits to reduce GHG emission intensity by 45% by 2030 relative to the 2005 level with the ratification of the Paris Agreement under the United Nations Framework Convention on Climate Change.⁶⁴

GOVERNANCE AND POLICY	
Country has identified a national focal point for climate change in the Ministry of Health	✓
Country has a national health adaptation strategy approved by relevant government body	✓
The National Communication submitted to UNFCCC includes health implications of climate change mitigation policies	✓
HEALTH ADAPTATION IMPLEMENTATION	
Country is currently implementing projects or programmes on health adaptation to climate change	✓
Country has implemented actions to build institutional and technical capacities to work on climate change and health	✓
Country has conducted a national assessment of climate change impacts, vulnerability and adaptation for health	✓
Country has climate information included in Integrated Disease Surveillance and Response (IDSR) system, including development of early warning and response systems for climate-sensitive health risks	✗
Country has implemented activities to increase climate resilience of health infrastructure	✓
FINANCING AND COSTING MECHANISMS	
Estimated costs to implement health resilience to climate change included in planned allocations from domestic funds in the last financial biennium	✗
Estimated costs to implement health resilience to climate change included in planned allocations from international funds in the last financial biennium	✗
HEALTH BENEFITS FROM CLIMATE CHANGE MITIGATION	
The national strategy for climate change mitigation includes consideration of the health implications (health risks or co-benefits) of climate change mitigation actions	✓
Country has conducted valuation of co-benefits of health implications of climate mitigation policies	✗

Table 2: Implementation of Climate Resilient Strategies in Malaysia



MALAYSIA

Disaster Overview

Disaster Management Reference Handbook | June 2019

Disaster Overview

Malaysia has experienced 51 natural disaster events in the last two decades (1998-August 2018). In that time period 281 people died, over 3 million people were affected, and disasters caused nearly US\$2 billion (MYR8 billion) in damages. Malaysia is susceptible to hazards including flooding, landslides, drought, and forest fire.⁶⁵

Hazards

Flooding

Some of the worst floods in the past 30 years have occurred since 2003. Those that were particularly bad for Malaysia were in 2006, 2007, 2010, 2014, and 2017.⁶⁶ The majority of the natural disasters occurring in the last twenty years (from 1998-August 2018) were floods (38 of the 51). Malaysia had the highest percentage (67%) of the population exposed to floods among ASEAN Member States (between July 2012 and January 2019) as reported by ASEAN Coordinating Centre for Humanitarian Assistance on disaster management in March 2019.⁶⁷ In 2017, flash floods and landslides affected more than 6,000 people and left several roads and infrastructure in Kundang badly damaged.⁶⁸

Landslides

Landslides in Malaysia frequently occur. From 1993-2011, approximately 28 major landslides were reported in the country with a total loss of more than 100 lives. The main factors that cause landslides or slope failure in Malaysia are rainfall, storm water activities, poor slope management, and improper site management during earth moving phases of construction. Additionally, highways affected by major landslides, even if non-fatal, can result in serious disruptions to the transportation network and adversely affect the public. As the population density of cities increases, the development of highland or hilly terrain also increased. This exposes urban communities to an elevated risk of landslide occurrence.⁶⁹

Drought

While flooding is the most predominant disaster, Malaysia has suffered ongoing years of drought events. The three most damaging and recent are that of 1992, 1998, and 2014. These

drought events gained particular attention because they affected the entire country. There are other smaller scale drought episodes that occur in smaller regions of the country.⁷⁰ The drought in March 2014 affected over 2 million people.⁷¹

Forest Fire

In Malaysia, there has been many bush and forest fire incidents due to the hot and dry spells, and especially during drought periods. During the 2014 drought, more than 7,000 cases of bush and forest fire incidences were reported between early February 2014 to mid-March 2014 with an average of about 300 calls daily.⁷²

Earthquakes

West Malaysia experiences some mild tremors from earthquakes in neighboring countries across the Straits of Malacca, while inland earthquake sources can be found in Sabah and Sarawak in East Malaysia. The 2015 Sabah earthquake struck Ranau, Sabah, Malaysia with a moment magnitude of 6.0 Richter on 5 June 2015 which lasted for 30 seconds. The earthquake was the strongest to affect Malaysia since the 1976 Sabah earthquake, and it took the lives of 18 climbers of Mount Kinabalu.

Tsunamis

Malaysia was affected by the 2004 Indian Ocean earthquake and tsunami on 26 December 2004. Due to its far proximity from the epicenter of the earthquake, Malaysia escaped major damages that struck countries hundreds of miles further away. The tsunami to Malaysia had caused the death 67 beach-goers and destroyed fishing villages and some properties along coastal areas of northwestern of Peninsular Malaysia. Sinkholes which were reported in Kampar and Ipoh after the event could be earthquake related.⁷³

Recent History of Natural Disasters

Malaysia has experienced several disasters in the last five years, including flooding, drought, earthquake, and landslide.

Floods-February 2018

From 3-6 February 2018, heavy rain caused flooding in parts of eastern areas of Malaysia (Sarawak State). Schools, hospitals, and as many as 4,859 people were evacuated from their homes and 25 evacuation centers were opened. Sarawak

Disaster Management Committee reported 501 displaced families in Samarahan, 372 in Serian, 172 in Sibu, 39 in Mukah, 4 in Sarikei, 258 in Bintulu, and 117 in Limbang. The air unit of the state Fire and Rescue Department (Bomba) delivered 14 tons of food items to 3,861 flood victims in Nanga Tau, Tatau, and Bintulu.⁷⁴

Floods-January 2018

The annual monsoon season brought heavy rains which caused serious flooding to six states in Malaysia in January 2018. Almost 5,000 people in Pahang were evacuated. Kuantan was the worst affected district with 3,931 flood victims being housed in 22 temporary relief centers.⁷⁵

Floods-November 2017

Hours of torrential rain caused flash flooding in the northern state of Penang in November 2017. Flooding killed at least seven people and Malaysian military forces were deployed to assist in the rescue of thousands displaced in Penang. Nearly 80% of Penang was hit by typhoon-like winds and heavy rains. More than 3,500 were evacuated from Penang, and in neighboring Kedah, more than 2,000 were forced to leave their homes.⁷⁶

Landslide – October 2017

On 21 October 2017, a landslide occurred in Tanjung Bungah, Penang, Malaysia resulting in 11 deaths, 3 injured persons and 4 missing persons.⁷⁷

Floods-January 2017

Seasonal heavy rains beginning on 23 January 2017 caused flooding in six Malaysian states (Johor, Kelantan, Pahang, Perak, Selangor and Sabah). Malaysia's National Disaster Management Agency (NADMA), the army, the police and other local government agencies conducted evacuations, established emergency shelters and evacuation centers, and provided disaster relief. The authorities deployed the Special Malaysia Disaster Assistance and Rescue (SMART) Team in the affected areas to carry out Search and Rescue (SAR) operations. The Malaysian Red Crescent (MRC) emergency response capacity for water search and rescue, welfare services, and health and disaster relief were all activated at the national and state levels.⁷⁸

Floods-December 2016

Heavy continuous rains caused flooding in the East Coast of Malaysia (Kelantan and Terengganu) in December 2016. In Kelantan,

three main rivers, Sungai Golok, Sungai Galas and Sungai Kelantan, flooded Bachok, Gua Musang, Jeli, Kota Bahru, Machang, Pasir Mas, Pasir Puteh, Tanah Merah, Tumpat and Kuala Krai. Authorities evacuated communities from Terengganu, Sungai Besut, Sungai Terengganu and Sungai Setiu. The floods temporarily displaced approximately 25,000 people and caused some villages to become inaccessible due to damaged bridges and blocked roads. Health centers and schools were also inundated. Schools that were not flooded were converted into evacuation centers.⁷⁹

Earthquake-June 2015

An earthquake struck the Ranau district (Sabah Province) on 5 June 2015. It damaged roads and buildings, including schools and a hospital.⁸⁰ Several climbers on Malaysia's highest peak were hiking at the time of the earthquake, causing the death of 16 individuals.⁸¹

Drought 2014

Approximately 2.2 million people in Malaysia were affected by the drought in 2014.⁸² Malaysia experienced a drought event which lasted approximately 2 months from mid-January 2014 to mid-March 2014. MetMalaysia issued drought early warnings. Drought disasters in Malaysia were managed according to the standard operating procedure (SOP) formulated by all the relevant agencies and led by the National Security Council of the Prime Minister's Department. The Malaysian Government through the Ministry of Agriculture and Agro Based Industries provided cash assistance to paddy farmers; RM \$1,400 was given to farmers for every hectare of crop damage due to drought. Fish fries, fish food, and equipment to repair the cages were also provided to the aquaculture farmers.⁸³

Floods and Landslides-December 2014

From mid-December 2014 to mid-January 2015, heavy seasonal rain and strong winds affected most parts of Malaysia. The rain caused severe flooding in the East Coast of Peninsular Malaysia, affecting Terengganu, Pahang, and Kelantan. The rain also coincided with higher than normal tides, which prevented flood waters from draining to the sea. At the peak of the flooding, more than 230,000 people were evacuated and at least 17 people were confirmed dead. Approximately 500,000 to 1 million people were affected, directly or indirectly, by the flooding.⁸⁴

Country Risks

Haze

Air quality has at times reached unhealthy levels in Malaysia, as a result of the haze. The haze is a result of fires caused by the slash-and-burn method of clearing vegetation for palm oil, pulp and paper plantations by corporations and small-scale farmers. Dry weather and drought conditions fuel the fire. Indonesia also has haze issues that can also spread across Malaysia, Singapore, Thailand, and the Philippines.⁸⁵ Malaysia's Minister of Energy, Technology, Science, Climate Change and Environment, Yeo Bee Yin has asked the Department of Environment (DOE) to improve enforcement to put an end to open burning in the country. Additional resources have been redirected to combat this problem.⁸⁶

Environmental Degradation

Malaysia's environmental landscape has been significantly degraded as a result of logging, largely due to timber or palm oil production. Malaysia's rainforests are under great threat of deforestation, which also contributes to the haze problem previously mentioned. A large percentage of greenhouse gas emissions are from deforestation.⁸⁷

Food Security

The most vulnerable sector of economy during drought events and other disasters are farmers.⁸⁸ The food staple of Malaysia is rice and nearly 70% is grown locally; therefore, a natural disaster can greatly affect the production of food.⁸⁹ During drought conditions, farmers or the farmers' association are provided with small water pumps to save crops and prevent losses. If the extent of losses is great and covers a sizeable number of farmers or area, then cash assistance may be provided to the farmers.⁹⁰

Country Risk Profile

Figure 3 shows INFORM's risk profile for Malaysia.⁹¹ INFORM is a global, open-source assessment focusing on risk for humanitarian crisis and disasters and assisting with prevention, disaster preparedness and response. The INFORM model is based on risk concepts published in scientific literature and has three dimensions of risk: hazards & exposure, vulnerability, and lack of coping capacity. INFORM gives each country a risk score of 1-10 (1 being the lowest and 10 the highest) for each of the dimensions, categories, and components of risk, as well as an overall risk score. The higher the score the more vulnerable a country is. The purpose of INFORM is to provide an open, transparent, consensus-based methodology for analyzing crisis risk at the global, regional or national level.⁹²

Malaysia has a 2019 Natural Hazard and Exposure risk of 3.4/10; a Vulnerability score of 3.0/10; and a Lack of Coping Capacity score of 3.2/10. Physical exposures to tsunamis (7.1) and flood (6.6) are the highest.⁹³

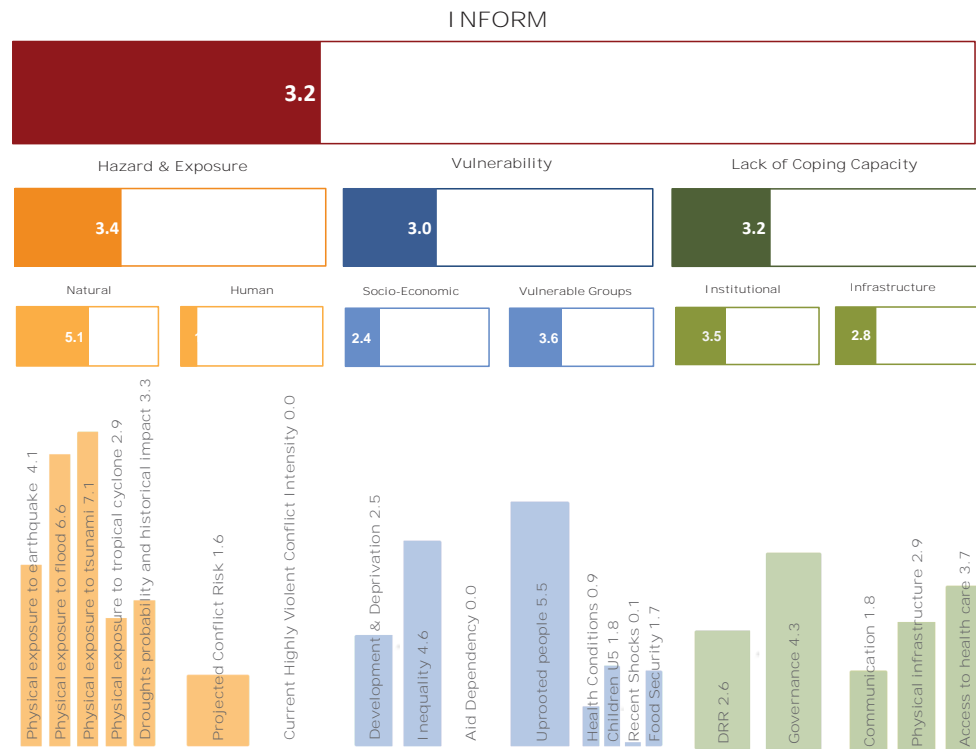


Figure 3: INFORM Country Risk Profile for Malaysia



MALAYSIA

Organizational Structure

Organizational Structure for Disaster Management

In 1972, the Malaysian Government established the Natural Disaster Management and Relief Committee (NDMRC) as a response to severe flooding and the need for a national integrated disaster management system. The NDMRC was responsible for coordinating flood relief operations for national, state, and district levels and instituting initiatives to reduce damage caused by flood and prevent loss of human life.⁹⁴

Disaster management in Malaysia is currently run by the National Disaster Management Agency (NADMA). NADMA was officially established 1 October 2015 under the Prime Minister's Department replacing the National Security Council (NSC) as the focal point for disaster management and consolidating the Disaster Management Division of the National Security Council (NSC), the Post Flood Recovery Unit of the Prime Minister's Department, and the Special Malaysia Disaster Assistance and Rescue Agency (SMART).⁹⁵

Malaysia Civil Defence Forces (MCDF) has been appointed as the Secretary for Disaster Management Committee at the state and district level and is responsible to enhance community resilience and preparedness towards disaster through the Cabinet Meeting chaired by Malaysia Prime Minister on September 8th 2015. MCDF set up a Disaster Management Secretariat Branch in order to regulate and coordinate the secretariat Disaster Management Committee activity at the state and district level.

The roles and responsibilities of the NADMA include:

- Role of Secretariat of National Disaster Management Committee
- Head of Humanitarian Assistance Disaster Relief delegation
- Formation of National Disaster Management Policy
- Regulation of Implementation policies
- Coordination of Disaster Risk Reduction Initiatives
- Implementation of Public Awareness Programme

- Managing Disaster Relief Trust Funds
- Deployment of SMART Team

NADMA strategic partners under Disaster Management and Relief Committee include :

- Malaysia Civil Defence Force (MCDF)
- Royal Malaysian Police
- Fire and Rescue Department
- Social Welfare Department
- Malaysian Meteorological Department (MMD)
- Malaysian Department of Irrigation and Drainage (DID)
- Ministry of Health (MOH)
- Civil Aviation Authority Malaysia (CAAM)
- Malaysian Meteorological Department – Ministry of Energy Science, Technology, Environment & Climate Change (MET)
- Atomic Energy Licensing Board (AELB)
- Malaysian Remote Sensing Agency
- Department of Mineral and Geosciences Malaysia
- Malaysian Maritime Enforcement Agency (MMEA)
- Malaysian Armed Forces⁹⁶

The disaster management organization structure continues under three levels: federal, state, and district. Management of disaster risk is regulated by Directive No. 20, established in May 1997 by the Prime Minister's office. Directive No. 20 issues guidance on policy and mechanisms related to national disaster management and relief activities. It guides the integration of the various agencies on disaster management responsibilities and functions, and it regulates management of disaster risks. Additionally, Directive No. 20 breaks down the disaster management cycle into four stages consisting of: prevention and mitigation, preparedness, response, and recovery. In March 2012, a second edition of Directive No. 20 was released to include comprehensive response and incorporation of international best practices.⁹⁷

The Disaster Management and Relief Committee (DMRC) was formed to carry out the responsibilities of Directive No. 20 in the formation of various aspects of the 4 stages of the disaster management cycle as official national policies and strategies.

The main function of the DMRC are as follows:

- Formulate national policies and strategies regarding the alertness and preparation of various agencies with regard to handling

disasters. The DMRC's State and District levels implement these polices.

- Ensure sound coordination of agencies involved in handling disasters and identifying tools of principle.⁹⁸

NDMRC recently reviewed Malaysia's disaster preparedness and response system and passed an amendment to the Malaysia Civil Defence Force Act 1951 (Revised 2016)⁹⁹ complementing the existing law to adapt a multi-hazard approach to disaster risk management, adding public involvement as part of the Community-Based Disaster Risk Reduction (CBDRR) as a key responsibility to the disaster risk reduction effort.¹⁰⁰ Malaysia's legal framework on disaster management is characterized as a Type C system by the IFRC Disaster Law Programme. Type C systems have a specific law regulating disasters, which focused on emergency preparedness and response to natural hazards (rather than disaster risk reduction), some technological hazards, and have elements of early warning and recovery. Type C systems tend to be found in countries with relatively low hazard exposure such as Malaysia.¹⁰¹

Malaysia's disaster risk management funds are budgeted annually through the Economic Planning Unit (EPU) and also at the state and district level. The amount allocated differs based

on size of the affected state and the number of the affected victims. There is also a disaster risk management fund specifically for NADMA. NADMA is collaborating with stakeholders toward drafting a new disaster risk management law.¹⁰²

Lead Government Agencies in Disaster Response

National Disaster Management Agency (NADMA)

Disaster management in Malaysia operates as a top-down government mechanism with the National Disaster Management Agency (NADMA) as the lead government agency responsible for all types of disaster management. NADMA also functions as the Secretariat at the federal level for disaster management, coordinating the mobilization of responding agencies via the Committee System.¹⁰³

Committee System Disaster Management

The Federal Disaster Management and Relief Committee (FDMRC) is the federal government lead in managing and handling national level disasters. In the event of disaster, the FDMRC convenes in the National Disaster Operations Control Centre (NDOCC) to manage the

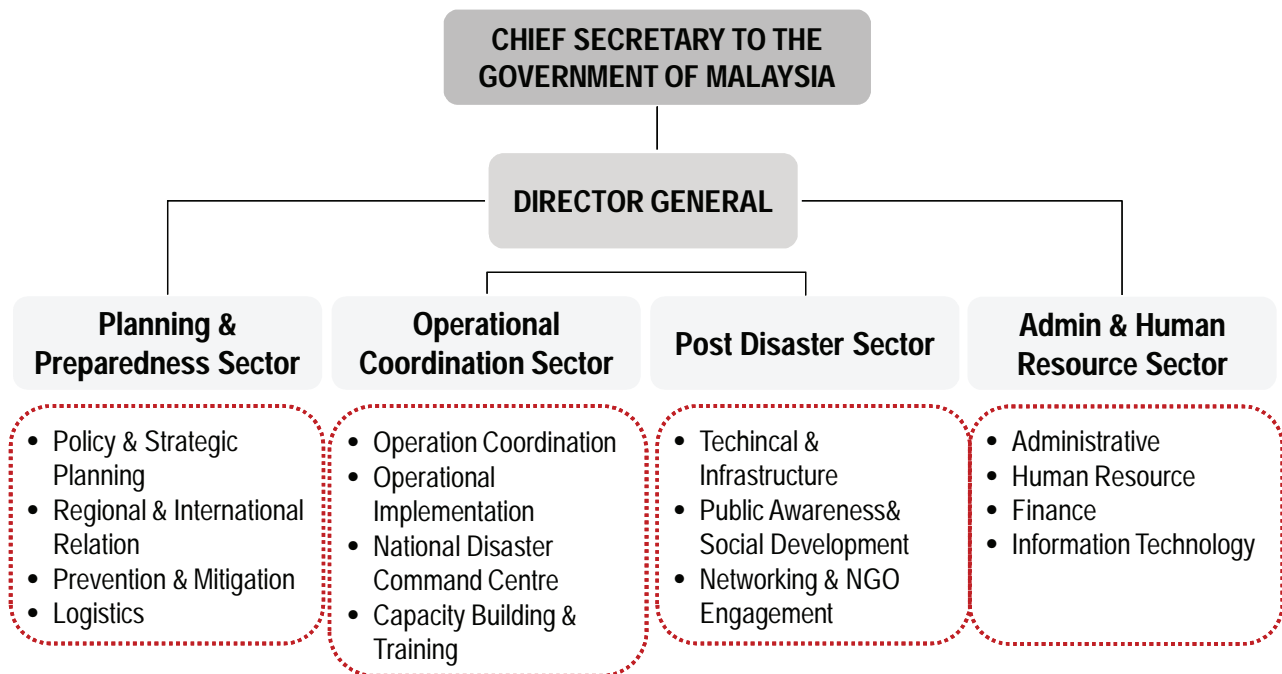


Figure 4: Organizational Structure Mechanisms

development of the event and make decisions on disaster mitigation strategies, search and rescue operation, and emergency relief operations are decided. This group handles Level 3 disasters which include complex events covering a wide area of two or more states. The Central Disaster Management Committee sets up Disaster Management policy and strategy, mobilizes assets, financial assistance and human resources.

The State Disaster Management and Relief Committee (SDMRC) manages state level disasters at the State Disaster Operation Control Centre (SDOCC). The State Disaster Management Committee is chaired by the State Secretary and handles Level 2 incidents without potential to spread beyond two or more districts but with potential to cause significant damage to life and property. The state level Disaster Management team coordinates assistance at the state levels to the affected districts especially in regard to assets, financial assistance and human resources for disaster management.

The District Disaster Management and Relief Committee (DDMRC) functions out of the District Disaster Operation Control Center (DDOCC) and handles district and village level disasters.¹⁰⁴ The village level disasters are managed by the DDMRC with inputs from the village committee as they do not have official disaster management at the village level.¹⁰⁵ The District Disaster Management Committee is chaired by the District Officer to ensure coordinated actions, sufficient assets, human resources, and manage the media. The District office is the key implementing agency in Level 1 disasters, controlled and containable incidents on the ground to ensure responses are coordinated, assets and human resources are sufficient and communication is established with the media.¹⁰⁶ Additionally Level 1 disasters are not complex and would only cause minimal damage to life and property. The District Level Authority has the capacity to control Level 1 incidents without or with limited outside assistance.¹⁰⁷

SMART Malaysia

The Special Malaysia Disaster Assistance and Rescue Team (SMART) was established in 1995 as a result of the Highland Towers tragedy.¹⁰⁸ A mudslide brought on by heavy rains triggered the Highland Towers condominium collapse in Selangor, Malaysia killing 48 people in December 1993.¹⁰⁹ Following the disaster, Malaysia approved the establishment of the SMART disaster rescue team, including members from

the Royal Malaysian Police (RMP), the Malaysian Armed Forces (MAF), and the Fire and Rescue Department of Malaysia. The SMART team's headquarters is in Pulau Meranti, Puchong, Selangor state. they are International Search and Rescue Advisory Group (INSARAG) certified signifying their compliance with UN standards and the operational capability for technical search and rescue operation that are difficult and complex.¹¹⁰

The SMART team is an operational arm of the Malaysian Government responding to regional as well as international level disasters. The SMART team has assisted with search and rescue missions for tsunami victims in Aceh (2004), earthquake victims in Muzafarabad, Pakistan (2005), at the Leyte landslide (2006), and with the Mount Kinabalu efforts following the Sabah earthquake (2015).¹¹¹

Malaysia Civil Defence Force (MCDF)

Malaysia Civil Defence Force was established on 24 March 1952 or popularly known as APM or MCDF (formerly JPAM and JPA3) for carrying out the civil defence activities in Malaysia. MCDF has two major roles during disasters which is to become Secretariat for Disaster Management and Relief Committee (DMRC) at state and district levels and to carrying out their work as responders.

Secretariat for Disaster Management and Relief Committee (DMRC)

On 27 August 2015, the National Disaster Management Committee Meeting chaired by the Deputy Prime Minister has proposed to appoint Malaysia Civil Defence Force (MCDF) as the Secretary of the Disaster Management Committee (DMRC) at the state, district and community level to replace the role of the National Security Council. Subsequently, the Cabinet Committee Meeting chaired by the Prime Minister on 8th September 2015, has decided that MCDF was officially appointed as the Secretary of Disaster Management Committee at the state, district and community levels. This decision later had been agreed to in the 1st Executive Meeting on Disaster Management and Relief in 2015 on 5th November 2015 chaired by the Deputy Prime Minister (Chairman of the National Disaster Management Committee). MCDF roles as secretary for the state and district follows accordingly to the guidelines set out in the National Security Council Directive No. 20.

In the same time, MCDF also coordinate the distribution of aid from the Fund of National Disaster Relief Trust (FNDRT) to the victims of the disaster based on guidelines set by FNDRT committee.

Key Disaster Management Partners

Malaysia has multilateral partnerships with regard to disaster management and all are coordinated through their NADMA. Depending on the size and location of the disaster and whether Malaysia is an Assisting State, there may be several levels of coordination.

Malaysia's associations with key disaster management partners are discussed in the following paragraphs detailing its membership and participation in the Association of Southeast Asian Nations (ASEAN), United Nations (UN) agencies, and with the International Federation of Red Cross and Red Crescent Societies.

ASEAN

The Association of Southeast Asian Nations (ASEAN) was originally formed in 1967 to reduce regional hostilities and prevent communism across Southeast Asia by Thailand, Singapore, Malaysia, the Philippines and Indonesia. Brunei Darussalam, Vietnam, Lao PDR, Myanmar, and Cambodia later joined ASEAN rounding out membership to its current 10 Member States. The aim of ASEAN is now to ensure the safety and prosperity of its citizens including a significant focus on preparing for and mitigating the effects of natural disasters since the region is vulnerable to several natural disasters, including typhoon, flood, drought, earthquakes and volcanic eruption. The ASEAN region has experienced three catastrophic disasters in the past 15 years, including the Indian Ocean Tsunami (2004), Cyclone Nargis (2008), and Typhoon Haiyan (2013).¹¹²

Natural disasters have affected the ASEAN region in large numbers of fatalities and economic losses. There are many resources and efforts in process to further enhance ASEAN's humanitarian assistance and disaster response capabilities. Malaysia was a founding member of ASEAN and Malaysia and Singapore are the only ASEAN countries with Urban Search and Rescue teams that have been officially certified by INSARAG through training and operational experience.¹¹³

Malaysia chaired ASEAN in 2015 during which time the ASEAN leaders signed the 2015

Kuala Lumpur Declaration on the Establishment of the ASEAN Community as well as the Kuala Lumpur Declaration on ASEAN 2025: Forging Ahead Together.¹¹⁴ Malaysia's National Disaster Management Agency (NADMA) is the lead with ASEAN's Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre).¹¹⁵

The ASEAN-Malaysia National Secretariat (AMNS), Ministry of Foreign Affairs exists to coordinate and streamline national efforts to enhance regional cooperation within the ASEAN framework at the national level and also to protect, promote and advance Malaysia's and ASEAN Member States' interests in the region and beyond.

In February 2019, the Deputy Prime Minister of Malaysia, Dr. Wan Azizah extended an offer to share the country's expertise and experience in disaster management with Brunei Darussalam, also a member of ASEAN. In particular, Dr. Azizah mentioned INSARAG certification as an expertise Malaysia could provide in exchange for infrastructure and training facilities from Brunei. While in Brunei, Dr. Azizah met with the Brunei Darussalam Home Affairs Minister Pehin Datuk Seri Awang Abu Bakar Apang to discuss practical ways to strengthen bilateral relations and foster cooperation, and enhance understanding between the two ASEAN countries.¹¹⁶

United Nations

The United Nations Country Team (UNCT) in Malaysia closely collaborates with the Government in Malaysia to support the country's national development priorities and the coordination of national and international action to protect the rights and wellbeing of invisible and excluded communities including refugees and migrants. Additionally, UNCT Malaysia is guided by the principles and values of the UN Charter, the Millennium Development Goals (MDG), and other fundamental UN treaties such as the Convention on the Rights of the Child and the Convention on the Elimination of All Forms of Discrimination against Women.

The UNCT in Malaysia is chaired by the UN Resident Coordinator and comprised of the United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA), United Nations High Commissioner for Refugees (UNHCR), United Nations Children's Fund (UNICEF), World Health Organization (WHO), World Food Programme (WFP) and the UNU-International Institute for

Global Health, among other UN organizations which run regional Malaysia based projects in collaboration with the Malaysian Government.

International Federation of Red Cross and Red Crescent Societies

The International Federation of Red Cross and Red Crescent Societies (IFRC) is an independent humanitarian organization that provides assistance and promotes humanitarian activities by its National Societies worldwide, with a focus on preventing and alleviating human suffering. It was founded in 1919 and includes 190 Red Cross and Red Crescent national societies. The IFRC carries out relief operations to assist victims of disasters and combines this with development work to strengthen the capacities of its member National Societies.¹¹⁷

The Malaysian Red Crescent Society (MRCS)

The Malaysian Red Cross (MRC) was established as a branch of the British Red Cross Society in April 1948 and in 1957, state branches of the MRC were organized as the Federation of Malay Red Cross Society. MRC was accepted as an affiliate member of the International Federation of Red Cross and IFRC on 24 August 1963. In 1975 the Malaysian Parliament changed the name of MRC to the Malaysian Red Crescent Society (MRCS) and passed the Malaysian Red Crescent Society (Change of Name) Act 1975.

The MRCS has played a part in disaster

management for over 60 years. MRCS has provided assistance to communities to prepare for, respond to, and recover from disasters. Additionally, MRCS provides mass meal cooking for disaster victims, and supports basic livelihood reconstruction at the national, state, and district levels. The MRCS depends on public donations to finance various services including care for disaster victims, 24-hour emergency ambulance service, primary health care in rural areas and first aid training.

A primary mission of MRCS is to produce trained volunteers among members of the public from various sectors, students, families, and others to assist vulnerable people during emergencies. The MRCS Training Institute was established in April 2005 to develop, implement, monitor and evaluate training activities and courses to help victims during emergencies and use skills and knowledge to increase the survival rate of victims. Participants can receive a First Aid Certification valid for three years.¹¹⁸ Photo 3 shows an MRCS Training course.

The MRCS began providing Emergency Ambulance Services in May 1969 and as well as management of the “999” emergency assistance hotline from the Kuala Lumpur General Hospital. Currently, MRCS provides free, 24 hour ambulance service for public emergencies, accidents and injuries. The MRCS National Headquarters has a fleet of 12 ambulances and, since 2010, has assisted more than 35,000 people requiring medical aid during



Photo 3: CPR Training from MRC Training Institute Staff.

accidents, childbirth, natural disasters and other emergencies. The MRCS also provides the following Health and Community Services:

- Blood Donation & Recruitment
- Organ Donation Campaign
- HIV/AIDS Programme
- The 'PRIHATIN' Project (We Care, We Share & We Give)
- Village Adoption
- Psycho-Social Support

U.S. Government Agencies in Malaysia

Washington National Guard

17-19 April 2019, Malaysia hosted the first Malaysian Humanitarian Assistance and Disaster Response (HADR) Civil-Military Course at the Malaysian Armed Forces Officer Mess in Wisma Perwira, Kuala Lumpur. The U.S. participants included Washington Emergency Management Division and the Washington National Guard as part of the State Partnership Program initiated between Malaysia and Washington State in August 2017. The Washington National Guard shared disaster response lessons learned from the 2014 Oso landslide incident, focusing on the civilian-military collaboration in a federally supported, state managed, locally executed response effort as well as the utilization of the incident command system (ICS). The aim of the collaboration was building stronger partnerships, military to military as well as expand civilian partnerships especially with regard to emergency management.¹¹⁹

USAID

The United States Agency for International Development (USAID) was established by executive order in 1961 to lead international development and humanitarian efforts to save lives, reduce poverty, strengthen democratic governance, and assist people's progress beyond assistance. They continue this mandate working in over 100 countries to:

- Promote Global Health,
- Support Global Stability,
- Provide Humanitarian Assistance,
- Catalyze Innovation and Partnership, and
- Empower Women and Girls

The Office of U.S. Foreign Disaster Assistance (OFDA) is USAID's lead for coordinating disaster assistance overseas and assisting non-governmental organizations, international organizations, and the United Nations to

meet humanitarian needs and complement government relief efforts. USAID/OFDA has responded to three disasters in Malaysia since 2005. In December 2014, USAID/OFDA supported partners to procure and distribute emergency relief supplies and implement water, sanitation, and hygiene interventions following floods in northern and eastern Peninsular Malaysia. Flooding resulted in 17 deaths and displacement of more than 230,000 people. Additionally, floodwaters and subsequent landslides blocked major roads, limiting access to evaluation centers and delaying the delivery of food, safe drinking water and other emergency supplies. The Government of Malaysia coordinated relief efforts by the Malaysian Armed forces, Royal Malaysian Police, Malaysian Red Crescent Society and NGOs to provide relief assistance to flood affected populations.¹²⁰ Contact information for the USAID office for the Asia Regional Mission is located below.

USAID Asia Regional Mission Contacts
Peter A. Malnak, Mission Director
Athenee Tower, 25th Floor
63 Wireless Road, Lumpini, Patumwan
Bangkok 10330 Asia
+66-2-257-3000
+66-2-257-3099
info-rdma@usaid.gov

Contact information for the U.S. Embassy in Malaysia is located below.

U.S. Embassy Kuala Lumpur
376 Jalan Tun Razak
50400 Kuala Lumpur
Phone: +60-3-2168-5000
Fax: +60-3-2142-2207

Participation in International Organizations

Malaysia participates in the following international organizations:

Asian Development Bank (ADB), Asia-Pacific Economic Cooperation (APEC), ASEAN Regional Forum (ARF), Association of Southeast Asian Nations (ASEAN), Bank for International Settlements (BIS), Community of Democrats (CD), Conference on Interaction and Confidence Building Measures in Asia (CICA -observer), D-8 Organization for Economic Cooperation (D-8), East Asia Summit (EAS),

Food and Agriculture Organization of the United Nations (FAO), Group of 15 (G-15), Group of 77 (G-77), International Atomic Energy Agency (IAEA), International Bank for Reconstruction and Development (IBRD), International Civil Aviation Organization (ICAO), International Chamber of Commerce (ICC) (national committees), Institute of Catastrophe Risk Management (ICRM), International Development Association (IDA), Islamic Development Bank (IDB), International Fund for Agricultural Development (IFAD), International Finance Corporation (IFC), International Federation of Red Cross and Red Crescent Societies (IFRC), International Hydrographic Organization (IHO), International Labour Organization (ILO), International Monetary Fund (IMF), International Maritime Organization (IMO), International Mobile Satellite Organization (IMSO), Interpol, International Olympic Committee (IOC), Inter-Parliamentary Union (IPU), International Organization for Standardization (ISO), International Telecommunications Satellite Organization (ITSO), International Telecommunication Union (ITU), International Trade Union Confederation (ITUC), Multilateral Investment Guarantee Agency (MIGA), United Nations Mission in the Democratic Republic of the Congo (MONUSCO), Non-Aligned Movement (NAM), Organisation of Islamic Cooperation (OIC), Organization for the Prohibition of Chemical Weapons (OPCW), (PCA), Pacific Island Forum (PIF) (partner), United Nations (UN), African Union/ United Nations Hybrid operation in Darfur (UNAMID), United Nations Conference on Trade and Development (UNCTAD), United Nations Educational, Scientific, and Cultural Organization (UNESCO), United Nations Industrial Development Organization (UNIDO), United Nations Interim Force in Lebanon (UNIFIL), United Nations Interim Security Forces for Abyei (UNISFA), United Nations World Tourism Organization (UNWTO), Universal Postal Union (UPU), World Customs Organization (WCO), World Federation of Trade Unions (WFTU) (NGOs), World Health Organization (WHO), World Intellectual Property Organization (WIPO), World Meteorological Organization (WMO), and the World Trade Organization (WTO).

Foreign Disaster Relief and Emergency Response

Civil Defence (Amendment) Act 2016

The Civil Defence (Amendment) Act 2016 dictates that members of the Civil Defence Force may be required to serve outside Malaysia and may also be attached to a civil defence force or organization outside Malaysia (Article 4E and 4F). The Amendment was passed by the Malaysian Senate on 21 June 2016 and empowers the civil defence agencies to provide humanitarian aid under a more systematic management of assignments. The bill also provides protection for the rights of the Malaysia Civil Defence Force (MCDF) staff and volunteers.¹²¹

MERCY Malaysia

MERCY Malaysia, or Malaysian Medical Relief Society, is one of the few non-Western NGOs active in the international humanitarian community. Dr. Jemilah Mahmood, a Malaysian obstetrician-gynecologist who wanted to volunteer her services, established it in 1999 and led the initial mission to Kosovo. The NGO started focused on medical relief and has evolved into a wider emergency relief effort with over 500 members and approximately 5,000 registered volunteers.¹²² In 2005, the NGO began utilizing a Total Disaster Risk Management approach in key domestic and international programs. MERCY Malaysia's services include: mobile clinics offering free basic medical checkups and dental treatment to vulnerable and underprivileged communities, free reconstructive surgery to treat cleft lip and palate defects via its Cleft Lip and Palate Project (CLIPP), health care to pregnant women and their newborns, cataract treatment, psychosocial intervention, and emergency response medical care.¹²³

In 2017 alone, MERCY Malaysia assisted citizens in 10 countries, including Malaysia, to build resilience from disasters and spent MYR \$15 million (US\$3.7 million) on aid.¹²⁴ MERCY Malaysia has implemented current and past programs in 33 countries or territories, ranging from the majority of ASEAN countries to Afghanistan, Bosnia, Chile, China, India, Iran, Iraq, Lebanon, Libya, North Korea, Palestine, Somalia, Sierra Leone, Sudan, Yemen, and others.¹²⁵

ASEAN ERAT

ASEAN's Emergency Response and Assessment Team (ERAT) is a regional rapid response team supporting the national disaster management organizations of Affected States in response to disaster assistance requests. ERAT team members are trained and operationally ready to deploy within 24 hours to respond to emergency situations and deploy to support relief efforts in the initial phases of a disaster emergency. Their core functions include:

- Conducting rapid assessments of disasters
- Coordinating with the AHA Centre for mobilization, response and deployment of regional disaster management assets, and
- Facilitating incoming relief assistance from ASEAN Member States¹²⁶

Malaysia has 24 trained ERAT members. Over 85 ERAT members have deployed on 21 missions in the Asia Pacific since 2008 covering events in the Philippines, Indonesia, Vietnam, Laos, Myanmar.¹²⁷ Figure 5 depicts the countries and number of people making up ASEAN ERAT members.



Figure 5: ASEAN ERAT Member Countries

Disaster Emergency Logistics System for ASEAN (DELSA)

Malaysia is home to ASEAN's Disaster Emergency Logistics System (DELSA). DELSA was launched on 7 December 2012 to develop a regional relief stockpile of items needed for emergency and disaster support as well as to support logistics capacity and operations for the AHA Centre and ASEAN Member States. DELSA focuses on three main elements including: regional emergency stockpiles, institutional capacity building, and communication and awareness. The Government of Japan through the Japan-ASEAN Integration Fund (JAIF), funds and supports DELSA's establishment and operations. The AHA Centre works with the WFP on logistics and technical aspects as well as with national disaster management organizations (NDMOs) of the ASEAN Member States to distribute relief supplies to countries affected by disaster as needed to support disaster management and response.

The WFP managed United Nations Humanitarian Response Depot (UNHRD) stockpiles supplies in a warehouse in Subang, Selangor, Malaysia.

ASEAN Member States can access the DELSA relief goods immediately in response to a disaster. In the event of an emergency, the AHA Centre coordinates with NDMOs of the affected Member States to distribute relief goods to countries affected by disaster and support the emergency response efforts as needed. DELSA also contributes to building the capacity of the AHA Centre and Member States through the AHA Centre Executive (ACE) Program.

The ACE Program is a 6 month training of disaster management officers across the region to improve the knowledge base and disaster management skills, as well as familiarize them with DELSA protocol and procedures of relief distribution and overall preparedness and response training. The DELSA Catalogue was launched in March 2016 to catalog the available stockpiles of relief goods housed in the warehouse. The commodities and equipment

housed in the facility were compiled based on recommendations from previous AHA Centre emergency responses and prioritized by items suited to the first phase of emergency responses, addressing the needs of the communities as well as providing support to the affected NDMOs. Additionally, the AHA Centre identified different relief items for various types of emergencies and hazard events, highlighting the most common needs for particular types of disasters. DELSA resources can also be resourced and mobilized prior to a response phase. However, DELSA response and allocations must follow the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) and Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP) procedures to coordinate deployment to disaster affected Member States and must go through the proper channels of delivery.¹²⁸

Laws, Policies, and Plans on Disaster Management

Malaysia's national guidelines on disaster management is based on Directive No. 20: National Policy and Mechanism on Disaster Management Relief, which acts as a framework for disaster relief management for the country. This directive was issued in 1997 by the National Security Council (NSC) of the Prime Minister's Department. It is made up of 29 titles and 13 appendixes. The objective of Directive No. 20 is to provide a policy guideline on disaster management and rescue in accordance with the level of the disaster. It also provides a mechanism for managing roles and responsibilities of agencies that are involved in combating disaster. Events of disaster that fall under this directive include:¹²⁹

- Natural disaster, such as flood, storm, drought, coastal erosion, landslide or disaster arising from storm and heavy rain.
- Industrial disaster, such as explosion, fire, pollution and leaking of hazardous materials from factories, plants and industrial centre that process produce and store such materials.
- Accident involving transportation, drainage, or transfer of dangerous materials.
- Collapse of high rise buildings and special structures.

- Air disaster involving places with building and people.
- Train collision or derailment.
- Fire involving a big area or fire in a high rise building or special structure where there are many people.
- Collapse of hydro dam or water reservoir.
- Nuclear accident and radiology.
- Emanation of toxic gasses at public places.
- Haze that causes environmental emergency and threatens public health and order.

Malaysia's disaster management guidelines are: ASEAN Agreement on Disaster Management and Emergency Response (AADMER), ASEAN Standard Operating Procedures for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (ASEAN-SASOP Chapter VI); Oslo Guidelines for the Use of Foreign Military and Civil Defence Assets (MCDA) in Disaster Relief; Use of Armed Escort for Humanitarian Convoys.

Malaysia has instituted several preventive measures and mitigation laws, policies and plans to minimize the impact of disasters on life, properties and the environment. The following laws are enforced for preventive measures:¹³⁰

- The Land Conservation Act 1960
- Environmental Quality Act 1974
- Local Government Act 1976
- Road, Drainage and Building Act 1974
- Occupational Safety and Health Act 1994
- Uniform Building Bylaws 1984

The following are Malaysia's Disaster Risk Management Laws, Decrees, and Regulations at the National Level:

- 1951 Civil Defence Act (Revised 1979)
- 1964 Emergency (Essential Powers) Act
- 1979 Emergency (Essential Powers) Act
- 1997 Policy and Mechanism of National Disaster Management and Relief NSC Directive
- 1998 Prevention and Control of Infectious Diseases Act
- 1998 Fire Services Act 341
- 2016 Civil Defence (Amendment)
- 2016 National Security Council Act¹³¹

Additional Government guidance and directives that expand the disaster management plans of Malaysia include:

National Security Council Act of 2016

The National Security Council Act of 2016 was instituted 1 August 2016, providing authority to the Prime Minister to declare a national security area based on advice of the National Security Council. Additionally, the Council has the power to do all things necessary or expedient for or in connection with its functions, notwithstanding any other written law, including controlling and coordinating government entities with respect to national security operations and issuing directives to such entities on matters concerning national security. The membership of the National Security Council consisted of the Chairman (who is the Prime Minister), the Deputy Chairman (who is the Deputy Prime Minister), the Minister of Defence, the Minister of Home Affairs, the Minister of Communication and Multimedia, the Chief Secretary to the Government, the Chief of Defence Forces, and the Inspector General of Police.

Additionally, the Director of Operations is able to exclude or evacuate any person from the declared area, impose a curfew, and direct the security forces to control movement of any person, vehicle, vessel, aircraft in and out of the secured area.¹³²

Eleventh Malaysia Plan 2016-2020

The eleventh economic development plan for the years 2016-2020 was released 21 May 2015 by the Malaysian government with targets and objectives to implement the framework to make Malaysia a high-income economy by 2020. The Plan identifies six 'Strategic Thrusts' to change the trajectory of the country's economic growth and advance the national income per capita above USD \$15,000.¹³³

The Plan details its disaster management strategy in Chapter 6, Focus Area D: Strengthening Resilience Against Climate Change and Natural Disasters. As Malaysia develops socioeconomically, the country is focused on resilient growth to ensure its development gains are not reversed by natural disasters. Therefore, planning and preparing for natural disasters, identifying which areas and communities are at risk, and providing the right tools in case such situations occur are important strategies highlighted in the Plan with regard to preparing a comprehensive disaster risk management (DM) framework and protecting the resiliency of the country and its future.

The following strategies are outlined in the Plan to reach these objectives:

- Strategy D1: Strengthening disaster risk management by establishing DRM policy and institutional framework, improving disaster detection and response capacity, incorporating DRM into development plans and creating community awareness;
- Strategy D2: Improving flood mitigation by generating new investments from flood mitigation projects, enhancing long-term planning and strengthening flood forecasting and warning systems; and
- Strategy D3: Enhancing climate change adaptation by developing a national adaptation plan, and strengthening resilience of infrastructure, natural buffers including water and agriculture sector as well as creating awareness on health impact.¹³⁴

Education and Training

The National Disaster Management Strategy (NDMS) of Malaysia is the backbone strategy to promote effective coordination and an integrated approach to cultivating a culture of prevention, protection, and public safety in the community. Its vision is to create a safe environment for the community through disaster management and sustainable development in the 21st century. Disaster preparedness is an initiative known to increase readiness and knowledge among the various stakeholders regarding the risks, related agencies, preventive measures and other disaster related information. Specific regional training and education improves overall preparedness towards a disaster likely to happen at a particular locality. However, lack of funding for community disaster preparedness and readiness training can be a challenge.¹³⁵

Therefore, Malaysian mosques are recognized as a viable partner for the coordination of communal activities and a complement to the government's rescue and aid efforts during community disasters. As the center of communities, mosques have the potential of providing critical data, information, knowledge and experience on the community. Hence, this information and experience can be made available to the visiting emergency workers and volunteers, who would have received basic training. The introduction of a community-based management system requires buy-in from the stakeholders as its adoption will have an effect on the overall way of doing things.¹³⁶

Mercy Malaysia also provides training and education. They recently hosted approximately 200 villages for a full day Disaster Risk Reduction program on 21 April 2019 in the local community of Kundang, Selangor. The workshop provided in conjunction with the Selangor Disaster Management Unit and Universiti Teknologi Malaysia's Disaster Preparedness and Prevention Center (UTM-DPCC), centered on strategies and activities for civilians that protect communities from potential hazards and minimize their vulnerability to disaster risks.¹³⁷

Disaster Management Communications

In Malaysia the National Disaster Management Agency (NADMA) is responsible for the management of the national disaster management system which provides effective relief machinery for recovery post flood disaster events.¹³⁸ Additional resources for Disaster Management Communications include the following capabilities.

Early Warning Systems

In the event of disaster, Malaysia can initiate short message service (SMS) notifications to alert relevant officers in charge of government agencies such as the Police, Army, the Malaysia Meteorological Department, and the National Security Division in the Prime Minister's Department.

Additionally, real time information of rainfall and river water levels are available via the Infobanjir website. The website is maintained by the Hydrology and Water Resources Division of the Department of Irrigation and Drainage (DID). The Infobanjir system enables effective dissemination of early warning for floods to the public. The hydrologic data is updated at regular intervals (hourly to daily) from over 300 remote telemetry units (RTUs) across Malaysia. These RTUs provide flood forecasting and warning system infrastructure, including 233 telemetric rainfall stations, 190 telemetric water level stations, 256 manual stick gauges, 84 flood warning boards, 217 flood sirens, and real time flood forecasting and warning systems in nine river basins. These RTUs transmit data from each state DID office to the Hydrology and Water Division to the Centralized Flood Monitoring System.¹³⁹

Additional Early Warning System activities are managed by:

- Malaysian Meteorological Department (MMD)
 - Tsunami Early Warning System
 - Weather Forecasting
 - Fixed-Line Alert System (FLAS)
- Malaysian Department of Irrigation and Drainage (DID)
 - Telemetry System – Flood Forecasting Models and Infobanjir
- Malaysian Centre for Remote Sensing (MACRES)
 - Disaster Management Applications System
- Department of Environment (DOE)
 - Air Pollutant Index (API) – Haze Alerts

Malaysian Tsunami Early Warning System

The Malaysian Tsunami Early Warning System was instituted by the Malaysian Meteorological Department in response to the Indian Ocean Tsunami of 2004. The alert consists of sirens, fixed-line alert system (FLAS), and short messaging system (SMS) to response agencies, mass media, telephone and website.¹⁴⁰

Flood Forecasting and Warning System

The Flood Forecasting and Warning System was developed by the Malaysian Drainage and Irrigation Department to disseminate alerts via warning siren, SMS, telephone and website to notify communities of imminent flood danger. Flood forecasting models have been applied at the Pahang and Kelantan Rivers. The flood relief agencies use the information from the flood forecasting systems to plan mobilization efforts, organize staff and equipment, and mitigate potential problems in advance of flooding.¹⁴¹

The Malaysian Remote Sensing Agency (MRSA), part of the Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC) is developing applications of remote sensing and related technologies for more effective management of agriculture production, natural resources, environment, disasters, security and land development of the country for use in operational agencies.¹⁴²

Responsible Agencies for Flood and Storm Warning

Nine percent of land area in Malaysia is flood prone and 4.8 million people live in areas at risk to flood.¹⁴³ Monsoon and flash floods are the primary climate related natural disasters in the country. Annually, significant loss including

casualties, disease epidemics, and property and crop damage have been attributed to flood disasters in Malaysia. Malaysia's flood prone area covers approximately 29 km and affects more than 4.82 million people. Additionally, annual damage caused by floods has cost an annual US \$4.82 million.

Flood disaster management is based on Directive No. 20 and Fixed Operating Regulations which outline directives and responsibilities for how various agencies should coordinate disaster management. The National Crisis and Disaster Management Mechanism (NCDMM) also doubles as the National Flood Disaster Relief Machinery (NFDRM) as the responsible party for major floods at the national, state, district, mukim (or sub-district) and village level. In the event of a flood, the relief machinery and emergency flood management and post-disaster funding and aid delivery networks assist victims in the aftermath of disaster events.¹⁴⁴ The Department of Irrigation and Drainage (DID) Malaysia is the lead agency for providing flood forecasting and warning services to the public.

The National Disaster Management Agency (NADMA) hosts an informative Flood Portal posting information on regional flooding. That site was upgraded in 2013 to cover all disaster information for the entire country. The Natural Disaster Portal, also known as Portal Bencana shown in Figure 6, is available at, <http://portalbencana.nadma.gov.my/portal>.¹⁴⁵ The English language version is also available.

Responsible Agencies for Geological Hazards

Geological Survey Act 1974 mandated the Department of Mineral and Geosciences Malaysia (JMG) as the responsible agency for survey and investigation relating to geological and geophysical processes, to regulate and control the geoscience services expertise and systematic investigations, covering the areas of surface and subsurface geological mapping, underground water resources, engineering geology, geological hazards and disasters, environmental geology, marine geology, geophysics, mineralogy, petrology and other areas of geosciences. JMG monitors, assesses, conducts research and provides geoscience information on geological hazards such as landslides, sinkholes, earthquakes, debris flows and coastal geohazards. JMG also provides policy advisory to other agencies and local authorities with regard to geological hazards and development planning in order to reduce economic and social losses as well as provide multidisciplinary approaches to combat climate change and reduce disaster risk holistically.

On earthquakes and tsunami hazards, JMG and Malaysian Meteorological Department (MMD) have shared responsibilities on seismology hazards with the assistance of the Public Works Department Malaysia on the prevention and mitigation on landslides.¹⁴⁶



Figure 6: Portal Bencana website

Armed Forces Role in Disaster Response

Malaysian Armed Forces

The Malaysian Armed Forces also known as Angkatan Tentera Malaysia (ATM) are responsible for the internal and external protection of the country. ATM is comprised of three branches of services including:

- The Malaysian Army – responsible for safeguarding the nation against land based threats
- The Royal Malaysian Navy (RMN) – responsible for protecting Malaysia's coastlines, territorial waters and economic zones from potential trespass or illegal activity
- The Royal Malaysian Air Force (RMAF) – responsible for protecting aerospace power to secure Malaysia's airspace and protect its national interests.

The ATM provides a variety of functions in assisting civil authorities with regard to domestic threats, maintaining public security, providing aid following natural disasters and assisting in national development programs.¹⁴⁷

Information Sharing

Understanding how to overcome the information challenges that civilian and military agencies experience during a typical disaster response mission is important. Knowing what the available HADR resources are will assist Joint Task Force leaders and staff during mission planning.¹⁴⁸ The sharing of information is critical because no single responding entity (whether NGO, international organization, assisting state, host Government) can be the source of all the required information.¹⁴⁹

Collaboration, information sharing (IS) and networking have been the backbone of successful disaster response and preparation. Disseminating information not only to those in country and threatened by disaster but also to those responding to assist in the emergency has been crucial to timely, efficient and effective disaster response. Recent technology has advanced to aid predicting and alerting of disasters around the world, which has resulted in early warning and evacuation measures and well as opportunities to react and prepare for incoming threats to countries. The following are some of the ways in which information regarding disaster risk management and response are shared.

There are many resources, stakeholders, and components to consider with IS before, during, and after a natural disaster. This section will discuss government, country specific, humanitarian, and regional sources.

Country-specific information sources

Malaysia National Disaster Management Agency

Phone: +603-8870-4800

Fax: +603-8870-4848

Email: admin@nadma.gov.my

Website: www.nadma.gov.my

Malaysian Meteorological Department (MET Malaysia)

Ministry of Energy, Science, Technology, Environment & Climate Change

Jalan Sultan 46667, Petaling Jaya, Selangor

Phone: +603 7967 8000/8200

Fax: +603-79550964

Hotline: +1-300-22-1638

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

English version: <http://www.met.gov.my/?lang=en>

Portal Bencana, a monitoring site hosted by the National Disaster Management Agency (NADMA). Provides current disaster information for the region including Flood, Haze, Storm, Landslide and other specific information relevant to major Malaysia cities. <http://portalbencana.nadma.gov.my/Portal/>

Pacific Tsunami Warning Centre (PTWC) <http://ptwc.weather.gov/>

Humanitarian Information Sources

UNOCHA mail list (request to be added)

ReliefWeb is a service of UNOCHA that consolidates information and analysis from organizations, countries and disasters for the humanitarian community.

Website: <https://reliefweb.int/>

PreventionWeb is provided by UNISDR to consolidate disaster risk reduction information into an online, easy to understand platform.

Website: <http://www.preventionweb.net/english/>

International Federation of the Red Cross and Red Crescent Societies (IFRC) is an independent, neutral organization ensuring humanitarian protection and assistance for victims of war and armed violence. It takes action in response to emergencies and at the same time promotes respect for international humanitarian law and its implementation in national law.
Website: <http://www.ifrc.org/>
Website: <https://www.redcross.org>

Humanitarian Response is a platform providing the humanitarian community a means to aid in coordination of operational information and related activities.
Website: <https://www.humanitarianresponse.info/>

Global Disaster Alert and Coordination System (GDACS)/Virtual OSOCC is a cooperation framework between the United Nations, the European Commission and disaster managers worldwide to improve alerts, information exchange and coordination in the first phase after major sudden-onset disasters.
Website: <https://vosocc.unocha.org/>
The latest alerts can be found here: <http://www.gdacs.org/Alerts/default.aspx>
To subscribe: <http://www.gdacs.org/About/contactus.aspx>

Consider other sites such as:

Humanitarian Data Exchange (HDX) is an open platform for sharing data across crises and organizations launched in 2014 with the goal of centralizing humanitarian data for easy access and analysis. HDX is managed by the Center for Humanitarian Data in The Hague and is part of OCHA the United Nations Secretariat.
Website: <https://data.humdata.org/faq>

Regional Information Sources

Changi Regional HADR Coordination Centre (RHCC) was launched in September 2014 to support the military of a disaster affected state in coordinating assistance with assisting foreign militaries. It aims to provide open, inclusive and flexible platforms that allow both regional and extra-regional militaries to work together effectively in a multinational disaster response. RHCC manages the OPERA CIS web portal to broadcast the updated situation status of multinational military responses to disasters to

minimize duplication and gaps in the provision of foreign military assistance.
Website: <https://www.changirhcc.org/>

To subscribe to RHCC Weekly and Spot Reports, email: Changi_RHCC@defence.gov.sg

United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) Regional Office for Asia and the Pacific (UNOCHA ROAP) seeks to optimize the speed, volume and quality of humanitarian assistance and coordinates emergency preparedness and response in the world's most disaster-prone region in support of national governments. ROAP covers 41 countries partnering with them for coordinated and effective international responses to emergency situations.
Website: <https://www.unocha.org/roap>

For UNOCHA situation reports, click on "Subscribe" button on bottom of page.

The **ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre)** on disaster management has developed a Disaster Monitoring and Response System (DMRS). The DMRS is a disaster monitoring tool designed in partnership with the Pacific Disaster Center (PDC), a U.S. Government supported applied science and information center based in Hawaii. The system allows the Jakarta based AHA center to visually monitor, geographically detect and synthesize multiple streams of data on hazardous events or disasters such as earthquakes, tsunamis, volcanic eruptions, cyclones, floods, and other natural disasters. The PDC feeds information to the DMRS which receives constant inputs on hazards in the region as they happen as well as hydrometeorological data such as wind speed and direction, clouds, sea temperature, etc. The maps can provide additional information with overlays based on population density data, location of airports and seaports, and major roads and infrastructure to provide context to threats and enable specific analysis for response and mitigation planning.¹⁵⁰
Website: <https://ahacentre.org/>

ASEAN Disaster Information Network (ADINET), is a publicly sourced open repository of information concerning regional hazards and disasters. The platform is run by the AHA Center who receives information and reports submitted

from the public regarding hazards and disasters in the area. Once a report has been submitted, AHA will vet the information for relevance and accuracy and then add the new information to the platform. Individuals and agencies can sign up to receive real time alerts to their email address on various categories such as tsunami, volcano, earthquake, floods, oil spills, landslides, etc. The ADINET has been recording disaster information in the region since the AHA Centre was operational in 2012.¹⁵¹

Website: <http://adinet.ahacentre.org>

The ASEAN Science-Based Disaster Management Platform is a one-stop interactive research portal which houses thousands of resources on disasters including documents and publications, reports and research, legislation on disaster risk reduction and disaster management as well as a discussion forum where individuals can pose questions, participate in surveys and create conversation about issues surrounding disaster management and mitigation.¹⁵²

Website: <http://asdmp.ahacentre.org>

The Annual ASEAN Monitor Report (ARMOR) aims to promote collaboration and information sharing among the disaster management community by consolidating disaster risk monitoring knowledge and contribute to the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Priority Programmes 1, 5, 6 and 7 with the following objectives:¹⁵³

- Sharing latest Disaster and Climate Risk Monitoring research initiatives, and collaborations;
- Sharing of lessons learnt from past deployments, latest operational initiatives, training activities and best practices;
- Bridging the gap between research and operations through translational and application research initiatives for the benefit of ASEAN communities; and
- Building awareness and increasing potential collaborative efforts between ASEAN Member States and interested stakeholders.

In addition to hosting the aforementioned forums and platforms, the AHA Centre also disseminates information on a regular basis to the public to raise awareness on disaster risk reduction and preparedness. During emergency times, the AHA Centre releases immediate Flash

Updates and Situation Updates. Whereas in non-emergency times, the AHA Centre publishes a weekly disaster update called Diasfore, and a monthly newsletter: The Column. All of these publications are available on www.ahacentre.org as well as the AHA Centre's social media accounts.

AHA has hosted an official Twitter account @AHACentre since July 2011. They currently have 2,606 followers and have shared over 4500 tweets. <https://twitter.com/AHACentre>

AHA also has a Facebook page with over 14,000 followers. <https://www.facebook.com/ahacentre>. They use these forums to provide disaster management information and provide updates and tools to an international audience. The Weekly Disaster Update is also shared on these sites along with photos and videos of disaster management trainings and exercises.

Subscribe at <https://ahacentre.org/subscribe-to-flash-update/>, or email info@ahacentre.org

U.S. Government (USG) Sources

Office of U.S. Foreign Disaster Assistance (OFDA)

The U.S. Office of U.S. Foreign Disaster Assistance is responsible for leading and coordinating the U.S. Government response to disasters overseas. OFDA responds to an average of 65 disasters in more than 50 countries every year. OFDA fulfils its mandate of saving lives, alleviating human suffering and the reduction of the social and economic impact to disasters worldwide in partnership with USAID functional and regional bureaus and other U.S. government agencies. The DOD supports OFDA in approximately 10% of foreign disasters the U.S. responds to. OFDA assists countries to prepare for, respond to, and recover from humanitarian crises.¹⁵⁴

Products from OFDA and its parent organization USAID include sitreps and maps, which are available via email mailing lists.

For OFDA updates on a disaster response, ask the OFDA representative for the respective COCOM to add you to the email list:

- OFDAindopacom@ofda.gov
- OFDAsouthcom@ofda.gov
- OFDAafricom@ofda.gov
- OFDAnorthcom@ofda.gov
- OFDAcentcom@ofda.gov
- OFDAeucom@ofda.gov
- OFDAsocom@ofda.gov

U.S. Agency for International Development (USAID)

USAID is committed to responding to crises around the world to help people and places most in need. They aim to:

- Promote Global Health
- Support Global Stability
- Provide Humanitarian Assistance
- Catalyze Innovation and Partnership
- Empower Women and Girls

USAID produces a monthly newsletter called USAID Newsletter which is available digitally at, <https://www.usaid.gov/news-information/newsletter>

More information and updates from USAID is available via their blog, IMPACT at, <https://blog.usaid.gov/> and on Facebook, Instagram, Twitter, and YouTube.

Website: <https://www.usaid.gov/>

APCSS is a U.S. Department of Defense institute that addresses regional and global security issues, inviting military and civilian representatives of the U.S. and Asia-Pacific nations to its comprehensive program of executive education and workshops.
Website: <http://www.apcss.org/>

Pacific Disaster Center

The Pacific Disaster Center (PDC) has trademarked an early warning and decision support system called DisasterAWARE®. DisasterAWARE® is primarily for disaster management practitioners and senior decision makers and supports disaster risk reduction and best practices throughout all phases of disaster management provides multi-hazard monitoring, and boasts the largest collection of scientifically verified, geospatial data and modeling tools to assess hazard risks and impacts.

The PDC also hosts a public application, Disaster Alert which is a free, early warning app to receive customizable map based visual alerts of active hazards. The app offers the fastest, most comprehensive global notification system covering every type of natural and man-made hazard to the public. It is available on both iPhone and Android. There is also a link to Disaster Alert without the app to view the world map documenting 18 hazard types.¹⁵⁵

Website: <https://www.pdc.org/>
<https://disasteralert.pdc.org/disasteralert/>
DisasterAWARE® / Emergency Operations

(EMOPS) system:

(Request account): <https://emops.pdc.org/emops/>

To subscribe to PDC reports email: response@pdc.org

Pacific Tsunami Warning Centre (PTWC)

<http://ptwc.weather.gov/>

Joint Typhoon Warning Center provides advanced warning for U.S. Government agencies and organizations in relevant areas.

Website: <http://www.usno.navy.mil/JTWC/>

All Partners Access Network (APAN)

APAN is the Unclassified Information Sharing Service (UISS) for the U.S. Department of Defense. APAN provides the DoD and mission partners community space and collaboration tools to leverage information to effectively plan, train and respond to meet their business requirements and mission objectives.

APAN's technology team has been supporting humanitarian assistance and disaster response (HADR) operations for over 15 years. APAN has played an integral role in the success of disaster responses in the 2015 California Wildfire Response and the 2013 Typhoon Haiyan Response among others, in which they provided organizations and militaries a centralized location to share information, increase situational awareness and decrease response time and duplicated efforts for best practices in HADR services.¹⁵⁶

Website: <https://www.apan.org/>

Note: The Multinational Communications Interoperability Program (MCIP) has an APAN site used in planning exercises and real world HADR information sharing.¹⁵⁷

CFE-DM

The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) is a U.S. Department of Defense organization that was established by U.S. Congress in 1994 and is a direct reporting unit to U.S. Indo-Pacific Command. It is located on Ford Island, Joint Base Pearl Harbor-Hickam, Hawaii. CFE-DM was founded in response to the aftermath of the Hawaiian Hurricane Iniki striking Hawaii in 1992. CFE-DM is the result of late Senator Inouye's vision to bridge the partnership of civil and military responders and

provide a DoD platform for building DMHA awareness and expertise in U.S. forces and with partner nations in the Asia-Pacific. CFE-DM provides training and education to help U.S. and foreign military personnel navigate complex issues in DMHA.

There are several informational products available for download from CFE-DM. They produce Disaster Information Reports (CDIRs), Humanitarian Information Reports (CHIP), Best Practices Pamphlets, Case Studies, Fact Sheets, Reports, Disaster Management Reference Handbooks, among others. CFE-DM's Disaster Management (DM) Reference Handbooks provide a baseline of information regarding countries most prone to disasters. The handbooks offer readers an operational understanding of a nation's disaster management capability and vulnerability, with detailed information on demographics, hazards, infrastructure, DM laws and plans, regional and international assistance, and other areas vital to a comprehensive disaster management knowledge base.

CFE-DM also works to improve cross-coordination, reduce duplication of efforts, and promote U.S. involvement in civ-mil consultations and dialogues with relevant HADR parties such as the AHA Centre, UNOCHA, and the RHCC and IFRC.

CFE-DM provides DMHA resources and updates at its website, as well as via Facebook and Twitter accounts.¹⁵⁸

Website: <https://www.cfe-dmha.org/>

CFE-DM Disaster Management Reference Handbooks are available for 23 countries. Figure 7 shows a selection of titles. They are also available at: <https://www.cfe-dmha.org/DMHA-Resources/Disaster-Management-Reference-Handbooks>.

CFE-DM Disaster Information Reports: <https://www.cfe-dmha.org/Publications/Reports>



Figure 7: CFE-DM Disaster Management Handbooks



MALAYSIA Infrastructure

Disaster Management Reference Handbook | June 2019

Infrastructure

Airports

Kuala Lumpur International Airport (KLIA) is Malaysia’s busiest airport transporting over 58.6 million passengers annually. It is located in the Sepang District, Selangor just south of the Kuala Lumpur capital. KLIA serves as the main hub for AirAsia, flyGlobal, UPS Airlines, and AsiaCargo Express. It has the longest runway in Malaysia and is the only airport capable of accommodating an A380 airbus and Antonov AN-225.

The second busiest airport in Malaysia is the Kota Kinabalu International Airport serving the greater Kota Kinabalu region. Providing travel for 8 million passengers annually, the airport has connections to most parts of the Asia-Pacific and can accommodate a Boeing 747 aircraft.

Other airports in Malaysia include the Penang International Airport, servicing approximately 7.2 million passengers and making it the third busiest airport in Malaysia; followed by the Kuching International Airport (KIA) located in Sarawak and serving the southwestern region of the country. KIA is the fourth busiest capable of handling 5.1 million passengers, followed by Senai International Airport, in the states of Johor and serving southern Peninsular Malaysia providing service to 3.1 million passengers a year.¹⁵⁹ There are 114 total airports in Malaysia;

39 of them have paved runways.¹⁶⁰ Photo 4 shows a Malaysia Airlines aircraft.

Seaports

An estimated 95% of Malaysia’s international trade is transported via international seaports. The largest and busiest seaport in Malaysia is the Port Klang. It is also the 12th largest container port in the world. Additional major federal ports in Malaysia include Penang Port, Bintulu Port, Kuantan Port, Kemaman Port, Johore Port, and the Tanjung Pelepas Port. There are also approximately 80 minor ports or jetties regulated by the Marine Department.¹⁶¹ Figure 8 depicts the major ports in Malaysia.

Land Routes

Roads

Malaysia’s road network covers 144,403 km of which 116,169 km are paved and 1,821 km are expressways. The Malaysian Peninsula’s road network is made up of high speed express highways and various hard surfaced secondary roads. There are fewer paved roads in Sarawak and Sabah.¹⁶²

The longest highway in the country is the North-South Expressway and extends between the Thai and Singapore borders.

The Malaysian Federal Roads System is the main national road network in Malaysia



Photo 4: Malaysia Airlines

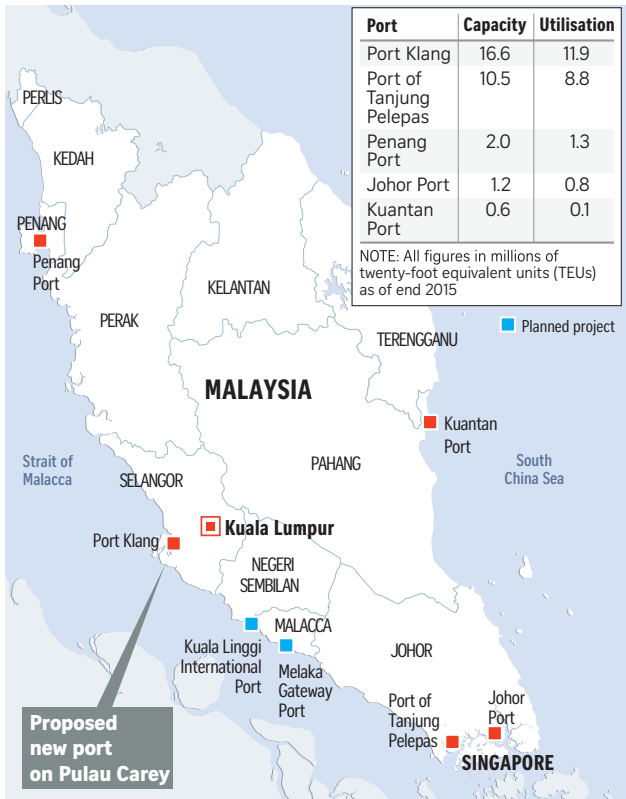


Figure 8: Major Ports in Malaysia 2017

and extends 49,935 km. The Malaysian State Roads System is comprised of secondary roads and is funded by the Malaysian Public Works Department of each state. The Malaysian Expressway System is a network of national controlled-access, four-lane expressways that connect East Malaysia and West Malaysia and the North-South Expressway that connects all major cities. The Pan Borneo Highway connects the Malaysian states of Sabah and Sarawak with Brunei.

All usage of expressways, construction, standards and management are subject to the Federal Roads Act of 1984.¹⁶³ Photo 5 is a view of a roadway in Kuala Lumpur.

Railways

Rail transportation in Malaysia consists of airport rail link and funicular railway lines, monorail, light rapid transit (LRT), and heavy rail (including commuter rail). The rail network covers the majority of Peninsular Malaysia and connects to the Thai railway network in the north. There are two main rail lines: The KTM West Coast Line which runs along the West Coast of Malaysia between Singapore and



Photo 5: Kuala Lumpur Highway

Padang Besar, Perlis, on the Malaysian-Thai border and the KTM East Coast Line which runs between Gemas in Negeri Sembilan and Tumpat in Kelantan.¹⁶⁴ Figure 9 depicts the Malaysian Railway Network.

Waterways

Malaysia has an intricate system of rivers and streams flowing year around due to constant rains. The total length of navigable rivers, canals and other inland bodies of water is 7,200 km.¹⁶⁵ Prolonged rains, however, often cause flooding affecting the majority of the population who have historically settled along the rivers. The longest river in Malaysia is the Rajang River which runs 350 miles and is located on the island of Borneo in East Malaysia. The Rajang is navigable up to 80 miles by oceangoing large vessels and an additional 100 miles from Sibu on smaller vessels.

The Pahang River is the longest river in Peninsular Malaysia at 275 miles long and formed at the joining of the Jelai and Tembeling rivers. It empties into the South China Sea and is the primary form of transportation for the region of Pahang.

The Klang River flows through Selangor and the Federated District of Kuala Lumpur and ends in the Straits of Malacca. The Klang provides more human and development use than any other river in Malaysia.

The Maliau River is renowned for its biodiversity as it supports more than 80 species of orchids as well as populations of orangutans and endangered Sumatran rhinoceroses.¹⁶⁶ It is also home to a quarter of the country's waterfalls including the Maliau Falls pictured in Photo 6.



Photo 6: Maliau Falls



Figure 9: Map of Malaysia Railway Network

Schools

The Malaysian education system encompasses learning beginning with preschool and continuing through university. The Government provides free education for children between the ages of 6 and 18, although only primary education ending at age 12 is compulsory. The primary language of instruction is Bahasa Malaysian although Chinese and Tamil are also used in primary education. English is taught as a second language and in 2003, legislation required that all math and science courses would be taught in English. Islamic studies are required in Malaysian schools and in 2004 the government announced a requirement to study the Koran in Arabic. At the completion of secondary education, students must take the public common exam, Sijil Pelajaran Malaysia (SPM).¹⁶⁷

Students interested in pursuing higher education after the secondary level must be able to fund their education as well as have the required academic grades to qualify for university.¹⁶⁸ Malaysia is home to dozens of tertiary institutions including universities, teacher training programs, and other public and private institutions where students can specialize in an assortment of trades.¹⁶⁹

The Prime Minister's office of Malaysia introduced a program in 2013 called, 'Bantuan Awal Persekolahan' (Back to School aid) which focuses on alleviating the cost of children's school expenses on families. The program provides assistance to students with a gross household income of less than MYR\$3,000.00.¹⁷⁰ Additionally, this program supplies, haircuts and school supplies including school uniforms, backpacks and stationary to children returning to school to ease the burden of fees on families. In 2017, approximately 10,000 students received school supplies by the Back to School programme.¹⁷¹ Photo 7 depicts children receiving school supplies in the Back to School aid program.

Disaster Risk Reduction in the Education Sector

Mercy Malaysia, a non-profit organization focused on providing medical relief, sustainable health related development and risk reduction in vulnerable communities, was established in 1999. Mercy Malaysia is one of the ASEAN Safe School Initiative (ASSI) consortium partners who continue to work toward addressing emerging risks around school safety, changing climate, urban risks, and provide a space for recognizing the ASEAN School Safety Champion.¹⁷²

Mercy Malaysia is also the lead for the ASEAN Safe School Initiative (ASSI) Project. ASSI began in 2013 to recognize the importance of disaster risk reduction in the education sector. The project aims to improve and accelerate the implementation of safe schools in all ASEAN countries by developing regional guidelines

and indicators of safe schools and allow key stakeholders an opportunity to contribute to the process. Education is often one of the first activities suspended following a disaster due to damaged school buildings or limited access to roads leading to schools. The safe school Program in Malaysia represents a comprehensive approach to school safety by promoting active involvement between communities, teachers, parents and students concerning safety planning and management and represents an important step toward providing safer teaching and learning environments to improve the safety of schools in Malaysia.¹⁷³

Additionally, Mercy Malaysia partners with the Ministry of Education to implement the School Preparedness Programme (SPP) in Malaysia. The SPP is designed to raise awareness among students of the hazards they may face and assist schools in minimizing the risks posed by natural disasters. Seasonal floods are a primary focus. The SPP utilizes a training workshop called the School Watching Workshop which introduces a Community Based Hazard Mapping tool that allows schools and communities to identify hazards and risks in and around the school and mitigate solutions to make schools safer.¹⁷⁴ Figure 10 illustrates the impact of the SPP Program participation in Malaysia from 2007 – 2016.

Communications

Due to private investments, Malaysia has one of the most advanced telecoms and internet

sectors in the entire Asia-Pacific region.¹⁷⁵ The Malaysian Ministry of Communication and Multimedia¹⁷⁶ and Telekom Malaysia Berhad have a public-private partnership agreement providing high-speed broadband throughout Malaysia.¹⁷⁷ Malaysia has a modern system of communication and good inter-city services. In addition, they have an adequate intercity microwave radio relay network between Sabah



Photo 7: Students received school supplies at Back to School 2018 program



Figure 10: School Preparedness Program Involvement and Participation Statistics in Malaysian States

and Sarawak via Brunei. The international communication service is outstanding and one of the most advanced telecom networks available. Malaysia also has 21 landlines per every 100 mobile phones. Therefore, tele-density is over 135 per 100 persons. Main mobile providers include Maxis, Celcom and DiGi, while the main fixed line operator is Telekom Malaysia.¹⁷⁸ International submarine cable networks are also using Malaysia to provide connectivity to Asia, the Middle East, and Europe.¹⁷⁹

Malaysia's state-owned television broadcaster operates two television networks with relays throughout the country. The government also has the leading private commercial media group that operates four television stations. In addition, there are satellite television subscription services, regional and local stations, private commercial radio broadcasters, and subscription satellite radio services.¹⁸⁰

Utilities

Power

Malaysia has an abundant electricity supply created by different sources. The most common fuel source in Malaysia is gas, and this contributes to over half of the national energy demand. Malaysia's energy supply can produce enough power to meet the demands of the growing population. Tenaga Nasional Berhad, a private company, provides electricity in Peninsular Malaysia, and Sabah Electricity provides the electricity in East Malaysia.

Oil production in Malaysia is dominated by the state-owned Petronas, one of the largest companies in Malaysia. They lead the way in the industry through working partnerships with other international players, particularly in the exploration sector. British Petroleum and Shell also operate in the country. The Malaysian Oil and Gas Services Council is the leading trade association in the sector.¹⁸¹

Water and Sanitation

Malaysia enjoys a dependable, abundant, and safe water supply. As of 2010, the Malaysian population uses an improved drinking water source and 96% of the population having adequate sanitation facilities. This is mostly due to several

public-private partnership projects that were implemented in the 1990s. These partnerships advanced the water supply and sanitation sector by funding projects such as the three build-operate-transfer-style water supply projects between 1987-89, and one build-operate-transfer-style sewerage project in 1992.

The individual state water authority is responsible for the management of water utilities in Malaysia. They fall under the Central Federal Public Works Department in Kuala Lumpur, which oversees their operations, while the National Water Services Commission is the national regulatory body for water supply in the country.

The Water Resources Master Plan oversees the development of water resources for the country through 2050. The Plan consists of approximately 60 major water projects, including building new dams, raising existing dams, constructing new treatment plants, inter-state water transfer, and identifying catchment areas for development.¹⁸²



MALAYSIA
Health

Health

Health Overview

Malaysia has a health system and health status on par with its rank as an upper middle-income country (defined as having a GNI per capita between \$3,956 and \$12,235).¹⁸³ Malaysia is a medical tourism destination, with Malaysia Healthcare Travel Council data showing the number of medical travelers to Malaysia has increased since 2011, reaching a high of 1.05 million travelers last year.¹⁸⁴ The Eleventh Malaysia Plan 2016–2020 articulates the development goals of Malaysia over the five-year period, which is the final five-year plan laying out a roadmap for Malaysia “to become an advanced nation that is inclusive and sustainable.” Health is a key component of one of the plan’s six major thrusts – Improving well-being for all. This

major strategic thrust of the Eleventh Plan is aligned with Sustainable Development Goal (SDG) 3, “good health and wellbeing.” Thus, a good overview of the current state of Malaysia’s health system and efforts is provided by the most recent SDG Index and Dashboards Report, with Figure 11 showing indicators for Malaysia.¹⁸⁵

Following a voluntary national review in 2017 of Malaysia’s progress in achieving SDGs, main messages regarding progress on health included:

- Child and maternal mortality rates were almost at the level of developed countries;
- Endemic small pox and polio had been eradicated;
- The spread of HIV/AIDS and malaria was reversed; there were drastic reductions in water-borne diseases;
- Deaths from treatable childhood diseases were greatly reduced; and
- 95% of public health service was subsidized.¹⁸⁶

SDG3 – Good Health and Well-Being

Maternal mortality rate (per 100,000 live births)	40.0	●	→
Neonatal mortality rate (per 1,000 live births)	4.4	●	→
Mortality rate, under-5 (per 1,000 live births)	8.3	●	→
Incidence of tuberculosis (per 100,000 population)	92.0	●	↓
HIV prevalence (per 1,000)	0.1	●	→
Age-standardised death rate due to cardiovascular disease, cancer, diabetes, and chronic respiratory disease in populations age 30–70 years (per 100,000 population)	17.1	●	↑
Age-standardised death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	33.4	●	●
Traffic deaths rate (per 100,000 population)	22.3	●	→
Healthy Life Expectancy at birth (years)	75.0	●	→
Adolescent fertility rate (births per 1,000 women ages 15-19)	13.4	●	→
Births attended by skilled health personnel (%)	99.0	●	●
Surviving infants who received 2 WHO-recommended vaccines (%)	96.0	●	→
Universal Health Coverage Tracer Index (0-100)	65.0	●	↗

Figure 11: Malaysia Sustainable Development Goals Index and Dashboards Report

Under the Eleventh Plan's strategic thrust of "Improving well-being for all" a holistic vision for Malaysian health and well-being is comprised of six focus areas:

1. Achieving universal access to quality healthcare
2. Providing adequate and quality affordable housing to poor, low- and middle-income households
3. Creating safer living environments for thriving communities
4. Improving road safety and emergency services to reduce fatalities

5. Enculturating the spirit of 1Malaysia to foster social cohesion and national unity
6. Promoting sports for healthy living and unity

Figure 12 depicts selected measures of performance across the six focus areas, with the exception of focus area B, for which the provided affordable housing metrics are aspirational instead of reflecting the current situation.¹⁸⁷

The focus area most directly related to health care is focus area A, "Achieving universal access to quality health care," for which Table 3 depicts four strategies and accompanying initiatives.



¹ Includes public and private hospitals, maternity and nursing homes, hospices and ambulatory care centres.

Figure 12: Malaysia Wellbeing Index

Healthcare System Structure

The Ministry of Health has an overall responsibility for the health sector including: formulating policies, legislation, strategic planning, resource mobilization and allocation, monitoring, evaluation, research, training, and coordination of external aid. Malaysia's healthcare structure includes a government-sponsored universal-coverage healthcare system. The Malaysian health sector is served by both public and private providers who deliver a range of services. The public system provides universal healthcare coverage to the population and is funded through the general tax. It delivers most of the highly subsidized hospital services, primary healthcare services, health promotion and disease prevention services. The public sector delivers a range of primary care services through health and community clinics, including outreach services through mobile clinics to remote villages. The private sector is concentrated in the urban areas of Malaysia and provides various services. It is funded through a fee-for service

Strategy A1: Enhancing targeted support, particularly for underserved communities.	Specific initiatives include the expansion of mobile healthcare, the improvement of primary healthcare teams, and domiciliary healthcare programs.
Strategy A2: Improving system delivery for better health outcomes.	Measures include the introduction of lean management practices in public hospitals to release latent capacity, and better enforcement of health regulations to improve transparency and health outcomes.
Strategy A3: Expanding capacity to increase accessibility.	Initiatives include developing new facilities, upgrading existing facilities, as well as enhancing healthcare personnel capacity and capabilities.
Strategy A4: Intensifying collaboration with private sector and NGOs to increase health awareness	Such collaboration will span a broad range of initiatives, from community health and prevention programs, to research and development efforts between industries, universities and research institutions.

Table 3: Focus Area A for Achieving Universal Access to Quality Healthcare – Strategies and Initiatives

mechanism mainly by individuals, private health insurance or corporations. The private sector also delivers health services through medical and dental clinics and hospitals.¹⁸⁸

Figure 13 depicts the healthcare system structure in Malaysia with the Ministry of Health at the top.¹⁸⁹

Challenges in the Healthcare System

Malaysia’s health care system is relatively strong, partially due to the resources committed to social sectors and the country’s rising status as an upper middle-income country.¹⁹⁰ However, there are challenges, as reviewed in the following sections, particularly with the rise of non-communicable diseases, a global challenge. Recognizing that primary health care is foundational to resolving many health challenges in the country, the Ministry of Health has called for greater investment in primary health care. This is considered a key step toward universal health care, and strong primary health care systems would need to focus on diabetes, heart disease, and cancer in Malaysia.¹⁹¹

Health Cooperation

The UN World Health Organization (WHO) is Malaysia’s primary partner in tackling health challenges and building capacity in the health care system. Other UN agencies also contribute health-related support, including UNAIDS, UN Development Programme (UNDP), UN Population Fund (UNFPA), UN Children’s Fund (UNICEF), Office of the UN High Commissioner for Refugees (UNHCR), and the United Nations University (UNU) International Institute for Global Health. As WHO is the predominant partner in health cooperation, Table 4 depicts the four strategic priorities and corresponding focus areas of the current Malaysia-WHO country cooperation strategy.¹⁹²

The government of Malaysia commits considerable resources toward public health and the country does not usually receive significant bilateral aid for health. One exception is a HIV/AIDS grant received primarily by the Malaysian AIDS Council from the Global Fund to Fight AIDS, Tuberculosis and Malaria.¹⁹³

Malaysia has been increasing bilateral health

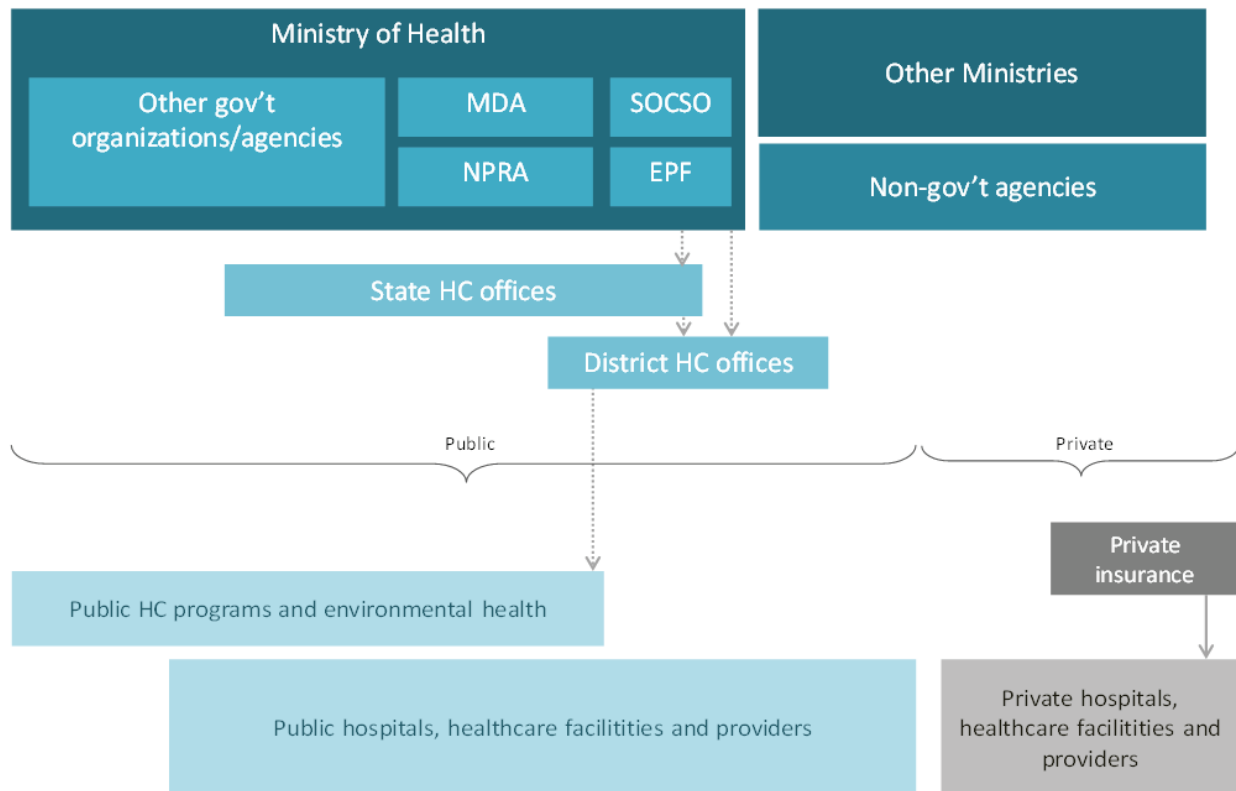


Figure 13: Malaysia Healthcare Structure

Strategic Priorities	Focus Areas
Strategic Priority 1: Facilitate multisectoral collaboration and support coordination for health.	<ol style="list-style-type: none"> 1. Enhancing disaster risk reduction, preparedness, response and recovery including through coordination of and information sharing on humanitarian action with partners as part of the United Nations Humanitarian Country Team. 2. Strengthening the engagement and collaboration of communities, state and non-state actors beyond the health sector, to achieve national priorities, such as NCDs, and work towards achievement of the SDGs. 3. “One Health” approaches to emerging disease surveillance and response, antimicrobial resistance (AMR), urban health, injuries, water safety, disabilities, environmental health and health promotion.
Strategic Priority 2: Strengthen policies and capacities to build a more resilient, sustainable and responsive health system that moves even further towards universal health coverage.	<ol style="list-style-type: none"> 1. Governance, organizational arrangements and financing to sustainably and equitably meet future health needs, including for an ageing population. 2. Integrated, responsive and equitable delivery of quality health services, including human resource planning and management, and the effective regulation and oversight of health technologies and service delivery. 3. The availability, quality, management, analysis and use of disaggregated data to support performance monitoring and improved service delivery, monitoring of equity, health risk management, and reporting on national priorities and the SDGs or other regional/global commitments.
Strategic Priority 3: Strengthen policies and capacities for assessing, preventing, managing, mitigating and monitoring health risks and chronic conditions.	<ol style="list-style-type: none"> 1. The prevention and management of NCDs and conditions and their risk factors, including mental health, injuries and disabilities, and enable individual and community empowerment and mobilization for health. 2. Environmental health, including strengthening the use of health impact assessments and similar tools to be able to assess, advise, manage and respond to an increasingly diverse range of environmental health issues and concerns. 3. Risk management, including strengthening the role and engagement of the health sector with national and state systems and organizations responsible for disaster risk management, ensuring sufficient ongoing IHR (2005) capacities and effective systems, monitoring and managing risks related to food safety and AMR, and increasing the effectiveness of risk communication.
Strategic Priority 4: Facilitate the use of Malaysian expertise and sharing of experiences in regional or global settings and events and to provide expert advice to other countries.	<ol style="list-style-type: none"> 1. Supporting Malaysia’s increasing role in sharing expertise and experience for the benefit of other countries as well as to support the development of global and regional public health policies, strategies and action plans, the sharing of experiences, and capacity-building. 2. Complementing Malaysia’s role in mechanisms such as ASEAN and the OIC. 3. Facilitating participation of Malaysia’s WHO collaborating centers in continuing to provide significant contributions to the regional and global work of WHO.

Table 4: Malaysia World Health Organization Country Cooperation Strategy 2016-2020

cooperation agreements with other nations. Prime Minister Mahathir Mohamad announced on 7 March 2019 that the governments of Malaysia and the Philippines are ready to finalize and sign a memorandum of understanding (MOU) on cooperation in the field of health.¹⁹⁴ Malaysia and Qatar have plans to sign an MOU regarding health cooperation, which the Deputy Prime Minister Wan Azizah announced on 28 November 2018.¹⁹⁵ The Malaysian and Indonesian Health Ministries signed a health cooperation agreement in 2011.¹⁹⁶

Academia and the private sector have also been active participants in increasing Malaysia’s health cooperation activities, particularly regarding digital health care and training. The University Of Malaya Faculty Of Medicine and the St. John Ambulance Malaysia NGO signed a

MOU on 17 April 2019 with the Taiwan-based Chang Gung Medical Foundation aimed at increasing specialist training and research in Malaysia.¹⁹⁷ The University of Malaysia Sabah signed an MOU with BookDoc on 22 March 2019 on teaching, research and the development of digital health care.¹⁹⁸ On 4 October 2018, the Ministry of Health signed an MOU with Collaborative Research in Engineering, Science and Technology (CREST), a research institute headquartered in Penang, focusing on digital innovation in health care delivery and solutions.¹⁹⁹

Malaysia, as an ASEAN member, continues to engage in a leading role in the ASEAN Post-2015 Health Development Agenda in the four priority cluster areas: 1) promoting healthy lifestyles; 2) responding to hazards and emerging threats;

3) strengthening health systems and access to care; and 4) ensuring food safety. Malaysia is actively engaged in the Global Health Security Agenda (GHSA), which is comprised of almost 50 nations and organizations collaborating to achieve measurable targets against biological threats and build core public health capacities. Through the GHSA, Malaysia is taking the lead with Turkey to strengthen emergency operations centers. Malaysian experts helped WHO in responding to Typhoon Haiyan in 2013 in the Philippines and with the global response to Ebola virus.²⁰⁰

Communicable Diseases

Tuberculosis (TB) is highly endemic and a significant public health concern in Malaysia²⁰¹, with an incidence rate of 93 per 100,000. While the incidence rate has been slowly rising over the last decade, the TB mortality rate has declined in the same time frame, as shown in the Figure 14 graph. Tuberculosis incidence rates are represented on the upper graph and mortality rates are represented on the lower graph. HIV+TB indicates individuals suffering both from TB and HIV vice solely TB.²⁰²

Dengue outbreaks continue to occur, despite significant efforts by the Ministry of

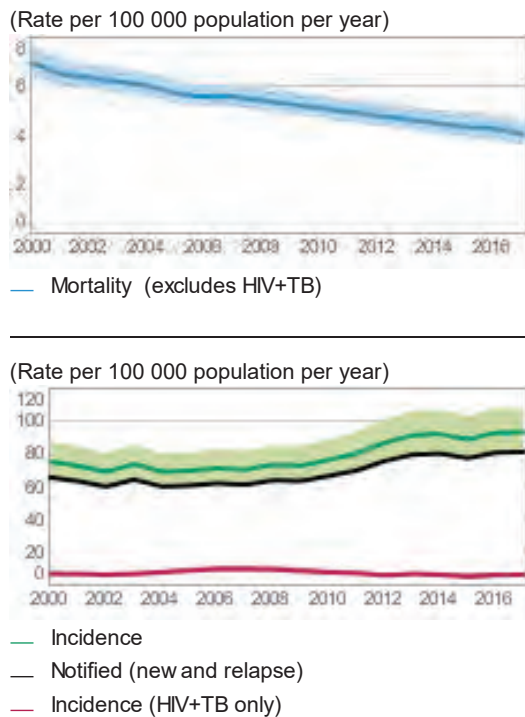


Figure 14: Tuberculosis and Mortality Rates for Malaysia

Health and state authorities. Engagement of local communities and the private sector is a continuing challenge in controlling dengue epidemics.²⁰³ Malaysia reported more than 38,000 cases of dengue as of 7 April 2019, out of which 59 fatalities were reported. Almost 60% of cases were reported from Selangor state, followed by Kuala Lumpur and Johor state. In 2018, there were 80,615 dengue cases, including 147 deaths, reported.²⁰⁴

Malaysia is experiencing great success against human malaria, while also seeing new challenges with a rare zoonotic malaria. Malaysia is currently predicted to eliminate indigenous human malaria by 2020, ten years ahead of schedule. In 2009, Malaysia became one of the founding members of the Asia Pacific Malaria Elimination Network, helping to significantly reduce malaria rates in Southeast Asia. In 2018, Malaysia had zero recorded cases of indigenous human malaria.²⁰⁵ Although a small risk remains of imported human malaria, the most dangerous of the four main human malaria strains, *Plasmodium falciparum*, accounts for up to 80% of malaria cases in rural areas of Sabah. The risk of multidrug resistant *P. falciparum* malaria is also present.²⁰⁶

Whereas the four main strains of human malaria (*p. falciparum*, *p. vivax*, *p. malariae*, and *p. ovale*) transmit from human to mosquito to human, the zoonotic *P. knowlesi* malaria transmits from monkey to mosquito to human. In Sarawak, *P. knowlesi* accounts for 28% of malaria cases.²⁰⁷ Transmission is limited to Sarawak and Sabah, both in Malaysian Borneo, but Malaysia saw a sharp increase between 2016 and 2017 from 1,600 cases to over 3,600 cases of *P. knowlesi*.²⁰⁸ The number of cases of *P. knowlesi* were ten times as high in 2017 as in 2008, as depicted in Figure 15. The rise of zoonotic malaria across Southeast Asia is linked to increased deforestation, with people near cut forests found more likely to be infected with *P. knowlesi* than people away from forests.²⁰⁹ Deforestation tends to be accompanied by humans and monkeys moving into closer proximity, within the range of the *Anopheles* mosquito, the transmission vector.²¹⁰

Since the peak in 2002, Malaysia has made considerable progress in reducing rates of human immunodeficiency virus (HIV) infection. A major milestone was achieved when Malaysia met the Millennium Development Goal, set in 2000, to “halve new HIV infection by 2015,” as illustrated in Figure 16.²¹¹

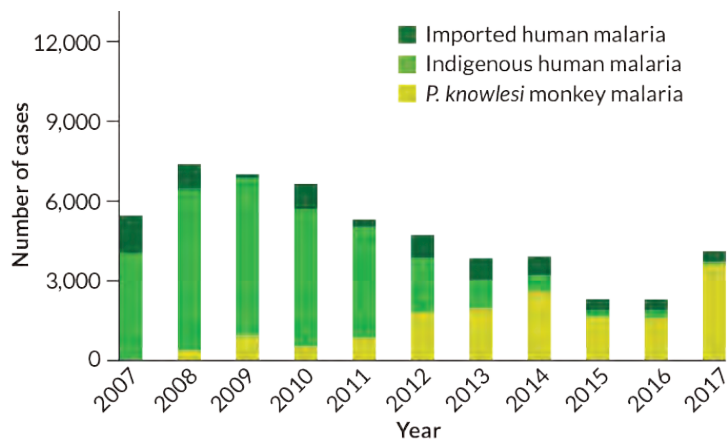


Figure 15: Malaria Cases in Malaysia 2007-2017

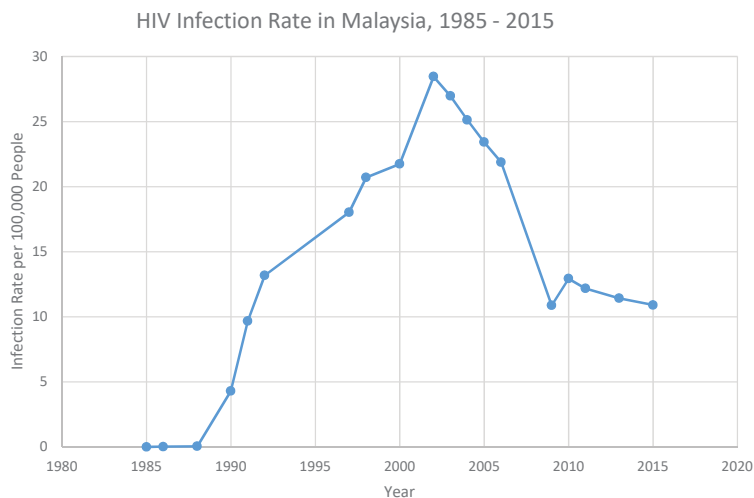


Figure 16: HIV Infection Rate in Malaysia, 1985-2015

The WHO certified Malaysia in 2018 as having eliminated mother-to-child transmission of HIV and syphilis. Malaysia is the second country in Asia to achieve this accomplishment, following Thailand. In 2000, 16% of babies born to HIV positive women became infected, but Malaysia committed to providing access to free testing and treatment and establishing monitoring and surveillance systems. In 2016, the mother-to-child transmission rate for HIV was below 2%, and there were less than 50 congenital syphilis cases for every 100,000 live births, which, according to WHO criteria, is considered as elimination of that public health problem.²¹²

Travelers to Malaysia should, at a minimum, be vaccinated against the food-borne illnesses hepatitis A and typhoid, in addition to routine

vaccinations recommended for everyone in the United States. Precautions should be taken to prevent mosquito bites, which can transmit dengue, malaria, chikungunya, and other mosquito-borne diseases. For more detailed vaccination recommendations, see the section on Force Protection/Pre-Deployment Information, Health Traveler Information. Travelers should always consult with a doctor for comprehensive vaccines and medicines recommended, depending on travel dates, length of stay, and specific destinations in country.²¹³

Non-Communicable Diseases

Non-communicable diseases (NCDs) are the biggest cause of deaths in Malaysia, as they are worldwide. NCDs are estimated to account for 74% of all deaths in Malaysia,²¹⁴ with some of the biggest categories being cardiovascular diseases and cancers. Approximately two-thirds of the population has diabetes, high blood pressure (hypertension), or high cholesterol levels (hypercholesterolaemia).²¹⁵ With 64% of males and 65% of females either obese or overweight, Malaysia has the highest rate of obese and overweight persons among Asian countries. A demonstration project, “Enhanced Primary Health Care,” has been implemented in Johor and Selangor in 20 health clinics since July 2017. With the purpose of increasing detection of chronic diseases – such as diabetes, hypertension and high cholesterol – preliminary results indicate positive outcomes, though more conclusive results are expected in September 2019.²¹⁶

In Malaysia’s medium-term national strategic plan for NCD, the main focus is on three types of NCD: 1) cardiovascular diseases, 2) diabetes, and 3) cancer. The strategic plan also targets four shared NCD risk factors: 1) tobacco use, 2) unhealthy diet, 3) physical inactivity, and 4) harmful use of alcohol.²¹⁷

NCDs accounted for 7 out of the 10 top causes of death and disability combined in 2017, as measured in disability-adjusted life years, and illustrated by Figure 17.²¹⁸

What causes the most death and disability combined?

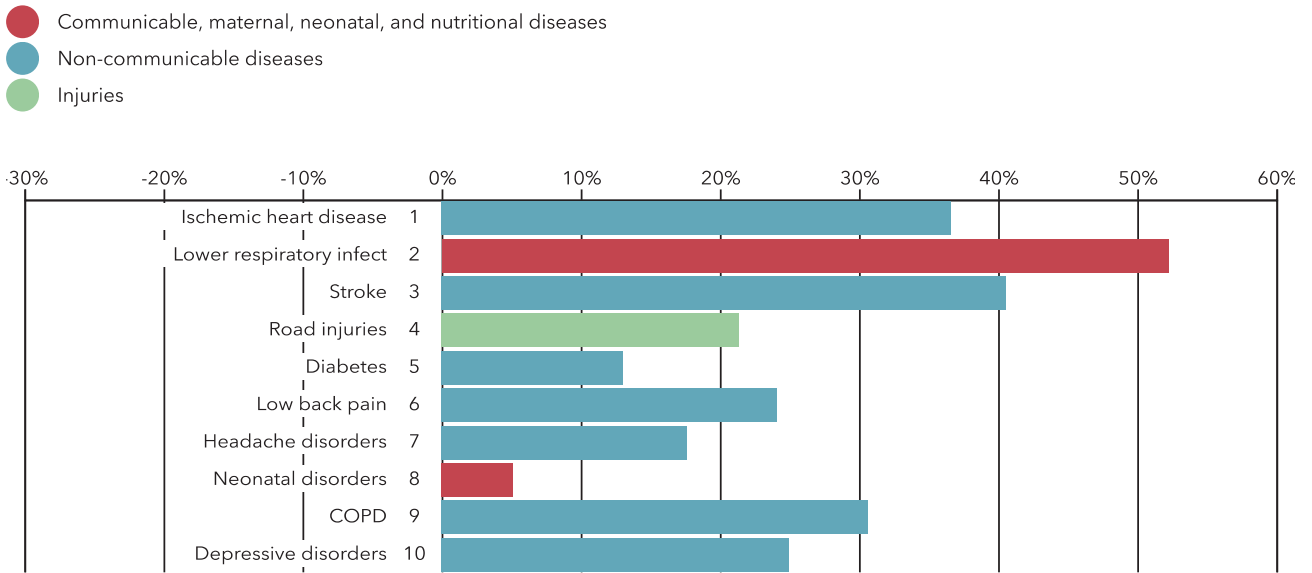


Figure 17: Death and Disability Rates Combined in Malaysia, 2017

Training for Health Professionals

There are 32 medical schools in Malaysia as of 2017, 11 public and 21 private, dating back to the 1963 establishment of the Faculty of Medicine at the University of Malaya. There were 18,789 students in Malaysian medical schools and approximately 15,000 Malaysians studying in medical schools internationally by the end of 2014. One incentive for training a high number of doctors is the WHO recommendation of 1 doctor to 400 persons for a developed nation. However, issues of quality versus quantity have entered medical discussions, marked by a 2014 statistic that 20% of medical students entering foreign universities since 2009 lacked minimum entry qualifications.²¹⁹ To address this, the government imposed a moratorium on new medical schools from 2011-2016.²²⁰

Malaysia has received training assistance among the technical expertise provided from the WHO, which since 2009 has included: training

on data mapping, data mining and measuring clinical effectiveness using electronic patient records and registry; training of trainers on the Grading of Recommendations Assessment, Development and Evaluation system; health level-seven training; training in advance molecular diagnosis of malaria (which has contributed to almost eliminating indigenous human malaria); training on cognitive behavior therapy for chronic diseases at the primary health-care level; and training modules and training of trainers on rapid assessment of avoidable vision impairment.²²¹

As part of the Government of Malaysia increasing efforts against non-communicable diseases, a flagship program, Komuniti Sihat Perkasa Negara (also known as KOSPEN), focuses on training health volunteers at the community level. The program provides community health volunteers with training to promote healthy behaviors, advocate for healthy policies, and facilitate community-level change to support healthier lifestyle practices.²²²



MALAYSIA

Women, Peace, and Security

Disaster Management Reference Handbook | June 2019

Women, Peace, and Security

The Women, Peace and Security (WPS) agenda is an initiative that aims to promote gender equality in peace and security decision-making processes at national, local and international levels. Malaysia has done much to promote and protect the rights of women as part of a larger regional body (ASEAN Member State) and as an individual country.²²³

Landmark commitments include the Declaration of the Advancement of Women in the ASEAN Region in 1988, and the Declaration on the Elimination of Violence against Women in the ASEAN Region in 2004. Regional meetings include the ASEAN Ministerial Meeting on Women.²²⁴ Malaysia ratified the ASEAN Convention Against Trafficking in Persons, Especially Women and Children (ACTIP) on September 2017.²²⁵ The country, along with other ASEAN member states, adopted the Joint Statement on Promoting Women, Peace and Security in ASEAN on 13 November 2017.²²⁶ This was the first statement by ASEAN that acknowledged the gendered effect of armed conflict and promoted women's participation in peacebuilding.²²⁷

Malaysia acceded in 1995 to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW),²²⁸ with the declaration it was “subject to the understanding that the provisions of the Convention do not conflict with the provisions of the Islamic Sharia’ law and the Federal Constitution of Malaysia.”²²⁹ The first accession to CEDAW was made with some reservations because there were some articles that contradicted the laws in Malaysia, specifically Islamic Sharia law and the Federal Constitution of Malaysia.²³⁰

Malaysia supported UN Security Council Resolution (SCR) 1325 in 2000, voting for it as a non-permanent member of the Security Council that year. SCR 1325 was the first resolution in which the UN Security Council addressed the disproportionate effect of conflict on women and girls, and emphasized the importance of women's participation in conflict prevention, conflict resolution, and peacebuilding for more peaceful

and secure societies.²³¹ The country has a separate ministry with the mandate of policymaking and implementation on gender issues, however it does not have a National Action Plan on the WPS agenda.²³² In addition, the Malaysian Red Crescent Society as an auxiliary to the Malaysian government raises awareness to prevent sexual and gender-based violence in times of disasters, emergencies and armed conflicts.²³³

Malaysia ranks 101 out of 149 countries in the 2018 Global Gender Gap Report. This report seeks to measure the relative gaps between women and men across four key areas: economic participation and opportunity, educational attainment, political empowerment, and health and survival, with 1 measured as the best to perform, and 149 measured as the worst to perform.²³⁴

Although the ideas about the role of women have changed in Malaysia and have become more liberal among the educated or modern communities, there are still many traditional socio-cultural stereotypes and attitudes about the role of women. Various attitudes may restrict a woman's role in society and can form barriers to the advancement of women's career and upward mobility in Malaysia. There are few women in leadership positions in key institutions such as political parties, top ministries, and executive and legislative bodies. This leaves women out of the decision-making processes and with very little influence in shaping government agendas. In Malaysia, often the man is the head of the household while the wife is expected attend to her husband's needs as well as take care of the children and elderly relatives in an extended family.²³⁵ Endemic poverty and human trafficking has also disproportionately affected women in the country. However, despite these obstacles, Malaysia has achieved women's improved health status, greater educational attainment, and increased participation in higher paying occupations.²³⁶ Following legislative activity, including a proposed anti-stalking law, sexual harassment act, and initiatives toward ending child marriage, the European Union ambassador to Malaysia stated in March 2019 the government was making good progress toward a safer and more equitable environment for women and girls.²³⁷ In addition, Malaysia recently established the parliamentary select committee on gender and equality rights, which held its first meeting in spring 2019 with intentions to improve the WPS agenda.²³⁸



MALAYSIA

Conclusion

Conclusion

Malaysia has experienced 51 natural disaster events in the last two decades in which 281 people died, over 3 million people were affected, and nearly US\$2 billion (RM8 billion) in damages resulted. The most challenging and frequent natural disaster facing Malaysia is floods.²³⁹ Malaysia had the highest percentage of population exposed to floods among ASEAN Member States between July 2012 and January 2019,²⁴⁰ and faces other potential threats to population health and development due to climate change.²⁴¹ Nine percent of land area in Malaysia is flood prone and 4.8 million people live in areas at risk to flood.²⁴² Annually, significant losses including casualties, disease epidemics, and property and crop damage, have been attributed to flood disasters in Malaysia.²⁴³

Malaysia's National Disaster Management Agency, NADMA oversees regional disaster risk response as well as involvement in international support. Malaysia continues to build on their disaster risk response plans, mitigation efforts and climate change adaptation to protect its citizens and its economic progress.²⁴⁴ The SMART Team is an operational arm of the Malaysian Government responding to international level disasters within the region and beyond. The SMART Team has assisted with search and rescue missions for tsunami victims in Aceh (2004), earthquake victims in Muzafarabad, Pakistan (2005), people affected by the Leyte landslide (2006), and with the efforts around Mount Kinabalu following the Sabah earthquake (2015).²⁴⁵

As Malaysia develops socioeconomically, the country is focused on the resilience of growth to ensure its development gains are not reversed by natural disasters. Therefore, planning and preparing for natural disasters, identifying which areas and communities are at risk and providing the right tools in case such situations occur are important strategies. These priorities are highlighted in the Eleventh Malaysia Plan with regard to preparing a comprehensive disaster risk management DM framework and protecting the resiliency of the country and its future. Malaysia has also achieved women's improved health status, greater educational attainment, and increased participation in higher paying occupations.²⁴⁶

Logistics capacity and operations (2016-

2020) was released by the Malaysian government with targets and objectives to implement the framework to make Malaysia a high-income economy by 2020. It further identifies six 'Strategic Thrusts' to change the trajectory of the country's economic growth and advance the national income per capita above USD \$15,000.²⁴⁷ Under the sixth strategic thrust of pursuing green growth for sustainability and resilience, the Eleventh Plan details a disaster risk management strategy in the focus area on strengthening resilience against climate change and natural disasters is the final five-year plan laying out a roadmap for Malaysia to become an advanced nation that is inclusive and sustainable.²⁴⁸

Malaysia's health system and health status are on par with its rank as an upper middle-income country (defined as having a GNI per capita between \$3,956 and \$12,235).²⁴⁹ Additionally, Mercy Malaysia partners with the Ministry of Education to implement community-based disaster risk reduction plans including the School Preparedness Programme (SPP), which raises awareness among students and schools to minimize their risks posed by natural disasters.²⁵⁰

Malaysia was a founding ASEAN member and continues to engage in a leading role in the ASEAN Post-2015 Health Development Agenda in the four priority cluster areas: 1) promoting healthy lifestyles; 2) responding to hazards and emerging threats; 3) strengthening health systems and access to care; and 4) ensuring food safety. Malaysia is actively engaged in the Global Health Security Agenda (GHSA), which is comprised of almost 50 nations and organizations collaborating to achieve measurable targets against biological threats and build core public health capacities. Through the GHSA, Malaysia is taking the lead with Turkey to strengthen emergency operations centers. Malaysian experts helped WHO in responding to Typhoon Haiyan in 2013 in the Philippines and with the global response to Ebola virus.²⁵¹

Malaysia has active ASEAN ERAT members and is home to ASEAN's Disaster Emergency Logistics System (DELSA). DELSA was launched on 7 December 2012 to develop a regional relief stockpile of items needed for emergency and disaster support as well as to support logistics capacity and operations for the AHA Centre and ASEAN Member States.²⁵² Malaysia continues to advance toward ambitious goals and blaze trails in the region, securing its people and bolstering a secure and sustainable country, environment, and future.



MALAYSIA Appendices

Disaster Management Reference Handbook | June 2019

Appendices

DoD DMHA Engagements in the Past Five Years (FY 2013-2018)

Malaysian Humanitarian Assistance and Disaster Response (HADR) Civil-Military Course – April 2019

The first Malaysian Civil-Military Coordination on Humanitarian and Disaster Relief Course was held in Kuala Lumpur, Malaysia, April 18, 2019. The course is designed to enhance the knowledge of disaster response stakeholders in Malaysia and operationalize civil-military coordination at the national, regional and international levels.²⁵³ The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) supported Malaysia's National Disaster Management Agency (NADMA) and the Malaysian Armed Forces (MAF) in administering the course. Lessons learned from real world scenarios such as the 2014 Malaysia floods, the 2018 Sulawesi earthquake, and the 2014 State Route 530 landslide in the U.S. state of Washington were discussed. The Pacific Disaster Center (PDC) facilitated the table top exercise where participants applied the variety of concepts learned during the course.²⁵⁴

Pacific Partnership – April 2019

The 14th iteration of Pacific Partnership was held in April 2019. Pacific Partnership 2019 (PP19) is an annual multinational humanitarian assistance and disaster relief preparedness exercise conducted in the Indo-Pacific. Each year participants work collectively with host and partner nations to enhance regional interoperability and disaster response capabilities, increase security and stability in the region, and foster new and enduring friendships in the Indo-Pacific.²⁵⁵ This year, the Malaysian Armed Forces and local medical staff joined PP19 personnel deployed with the Military Sealift Command expeditionary fast transport ship USNS Fall River. They provided medical services to Kuching residents during a community health engagement at SK Tanah Puteh.²⁵⁶

Exercise Bersama Warrior-March 2019

Bersama Warrior is an annual joint bilateral exercise between the U.S. and Malaysia designed to develop and improve their collective capacity to plan and conduct joint and combined operations. The 2019 exercise took place in Kuala Lumpur, Malaysia in March 2019. The exercise aims to strengthen the relationship between the U.S. and the Malaysian Armed Forces while identifying effective solutions to common challenges such as humanitarian assistance, maritime security, and counterterrorism, and to increase capacity to quickly and effectively respond to the crisis. The Washington National Guard was selected to be heavily involved in the exercise. Malaysia and the Washington National Guard formed a partnership in August 2017 under the National Guard Bureau sponsored State Partnership Program.²⁵⁷

ASEAN Humanitarian Assistance and Disaster Relief Exercise - JULY 2018

The U.S. and Malaysia are co-chairs of the ASEAN Defence Ministers Plus Expert Working Group on Humanitarian Assistance and Disaster Relief (ADMM Plus EWG HADR) and worked together to facilitate a table top exercise (TTX) in Kuala Lumpur, Malaysia 25-26 July, 2018. The multinational exercise included representatives from all 18 ADMM Plus EWG HADR countries, ASEAN Secretariat, AHA Centre, UN OCHA, IFRC, APCSS, and CFE-DM. The aim of the exercise was to evaluate coordination mechanisms and standard operating procedures through the pre-deployment and deployment phases of a hypothetical magnitude 7.2 earthquake centering around Manila, Philippines. The exercise highlighted the need for consistent communication and information sharing between ASEAN and non-ASEAN member states and findings from the exercise would inform the preparation for a subsequent event in scheduled for the following year.²⁵⁸

Maritime Training Activity – September 2018

The Training Activity (MTA) Malaysia was executed by the U.S. and Royal Malaysian Navy. About 300 U.S. and Malaysian Sailors aboard multiple ships participated in the exercise. The exercise involves both an ashore and at-sea phase, demonstrating both navies' commitment to applying learned techniques and tactics while operating together out at sea. Sailors from both navies engaged in visit, board, search and seizure (VBSS) trainings, division tactics (DIVTACS) to

enhance cooperative fleet maneuvers, a gunnery exercise, flight operations with the U.S. Navy's MH-60S and Royal Malaysian Navy's Super Lynx helicopters, and a search and rescue exercise (SAREX).²⁵⁹

Pacific Partnership - April 2017

Pacific Partnership 2017 started with the arrival of the Military Sealift Command expeditionary fast transport USNS Fall River (T-EPF 4) in Malaysia. The arrival marked Malaysia's 12th year participating in Pacific Partnership, as well as its second year as a host nation. Activities in Malaysia included humanitarian aid and disaster response preparedness exercises, medical exchanges, civil engineering projects, and community engagement events.²⁶⁰

Civil-Military Interaction Workshop- April 2015

Civil-Military Interaction Workshop-April 2015 Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) attended the civil-military interaction workshop to increase shared understanding among those involved in HADR and to build awareness of what these organizations bring to assist affected countries. The Workshop was a co-sponsored event between Australian Civil Military Center and the Malaysian Armed Forces, held at the UN Peace Keeping Center and Port Dickson, Malaysia.²⁶¹

International/Foreign Relations

Malaysia was one of the five original members (along with Indonesia, Philippines, Singapore, and Thailand) to establish ASEAN on 8 August 1967. ASEAN now also includes Brunei, Cambodia, Laos, Myanmar, and Vietnam, and operates on consensus.²⁶² Malaysia has been a member of the Organisation of Islamic Cooperation since 1969, when it was founded.

Malaysia is also a participant in the Five Power Defence Arrangements, in which the UK, Australia, New Zealand, Malaysia and Singapore agreed in 1971 to consult each other immediately if an armed attack is threatened or occurs to decide what measures to take. The arrangement was established after the UK ended defense guarantees for Malaysia and Singapore, due to its 1967 decision to withdraw forces east of the Suez. The UK has staff in the Integrated Area Defence System Headquarters (HQ IADS) at RMAF Butterworth in Penang, Malaysia.

In 1957, Malaysia joined the United Nations,²⁶³ in which it plays an active and troop-contributing role in peacekeeping operations, particularly in the UN Interim Force in Lebanon.²⁶⁴ When last it was a non-permanent member of the Security Council from 2015-2016, following the downing of Malaysia Airline Flight 17 in Ukraine, Malaysia introduced a draft resolution to establish an international criminal tribunal, which was vetoed by Russia.²⁶⁵

Malaysia has overlapping claims to the South China Sea, along with the Philippines, Vietnam, Brunei, Taiwan, and China, which claims by far the largest portion.²⁶⁶ Malaysia has economic ties to China, though has had increasing diplomatic responses to Chinese assertiveness in the South China Sea. Economic ties to China came into question following the surprising election victory in May 2018 of Prime Minister Mahathir Mohamad. After his election, PM Mahathir Mohamad reviewed Chinese investment projects in Malaysia that were part of China's ambitious global development strategy, the Belt and Road Initiative. The Malaysian prime minister cited the financial challenges his predecessor left the country, leading him to renegotiate the Chinese construction projects, which risked a high debt burden.²⁶⁷ Japan has also been an important investor in Malaysia, and one it has been increasingly reaching out to in an attempt to balance China's economic influence. On his first overseas trip PM Mahathir visited Japan. Japanese Prime Minister Shinzo Abe described Japan as Malaysia's biggest investor country. Abe also committed to helping PM Mahathir revitalize his "Look East Policy," which was proposed when Mahathir first took office in the 1980s and included the idea of Malaysia learning from the work ethic of Japan.²⁶⁸

Piracy is an issue in the Strait of Malacca, which is surrounded by Malaysia, Singapore, Indonesia, and the southern tip of Thailand. In addition to maritime security, the high volume of maritime traffic has led to accidents, making safety a concern as well.²⁶⁹ To address safety and security in the strait, Malaysia has coordinated sea patrols, air patrols, and intelligence exchange with Indonesia, Singapore and Thailand.²⁷⁰

Force Protection/Pre-Deployment Information

The following information is provided for pre-deployment planning and preparations. Visit www.travel.state.gov prior to deployments for further up-to-date information.

Passport/Visa

Before entering Malaysia, you must ensure that your passport has at least six months validity remaining. U.S. citizens entering Malaysia do not require a visa if staying for less than 90 days. Travelers are also required to have at least one blank passport page before entering. For additional information in regard to entry or exit requirements, travelers may consult:

Embassy of Malaysia:

3516 International Court N.W.

Washington DC 20008

Telephone: General Line (office hours):

+1.202.572.9700

Duty Officer (after office hours): +1.202.375.4396

Fax: +1.202.572.9882

Email: mwwashington@kln.gov.my

Emergency Contact Information

Victims of Crime:

Report crimes to both the local police and the U.S. Embassy. The local equivalent to the “911” emergency line in Malaysia is 999 from a landline and 112 from a mobile telephone. Alternatively, call the Royal Malaysia Police Operations Center in Kuala Lumpur, 03-2115-9999 or 03-2266-2222. You may also contact the U.S. Embassy at +(60) (3) 2168-5000.

A police report is necessary for the embassy to help victims follow-up on incidents of crime. In some tourist areas, the police have established small “Tourist Police” stations manned by personnel familiar with helping visitors to Malaysia. Remember that local authorities are responsible for investigating and prosecuting the crime.

Currency Information

The currency in Malaysia is the Malaysian Ringgit. Malaysia imposes entry and exit currency restrictions. Entry currency restrictions state travelers may not enter or exit Malaysia with more than US\$10,000.

Travel Health Information

Vaccination and Prescriptions

The CDC provides the following recommendations for travel to Malaysia. The information in Table 5 is taken directly from the CDC website.²⁷¹

Medical Care

Eat and Drink Safely

Unclean food and water can cause travelers’ diarrhea and other diseases. Reduce your risk by sticking to safe food and water habits.

Eat

- Food that is cooked and served hot
- Hard-cooked eggs
- Fruits and vegetables you have washed in clean water or peeled yourself
- Pasteurized dairy products

Don’t Eat

- Food served at room temperature
- Food from street vendors
- Raw or soft-cooked (runny) eggs
- Raw or undercooked (rare) meat or fish
- Unwashed or unpeeled raw fruits and vegetables
- Unpasteurized dairy products
- “Bushmeat” (monkeys, bats, or other wild game)

Drink

- Bottled water that is sealed
- Water that has been disinfected
- Ice made with bottled or disinfected water
- Carbonated drinks
- Hot coffee or tea
- Pasteurized milk

Don’t Drink

- Tap or well water
- Ice made with tap or well water
- Drinks made with tap or well water (such as reconstituted juice)
- Unpasteurized milk

Take Medicine

Talk with your doctor about taking prescription or over-the-counter drugs with you on your trip in case you get sick.

Prevent Bug Bites

Bugs (like mosquitoes, ticks, and fleas) can spread a number of diseases in Malaysia. Many of these diseases cannot be prevented with a vaccine or medicine. You can reduce your risk by taking steps to prevent bug bites.

To prevent bug bites:

- Cover exposed skin by wearing long-sleeved shirts, long pants, and hats.
- Use an appropriate insect repellent (see below).

Routine vaccines (for all travelers)	Make sure you are up-to-date on routine vaccines before every trip. These vaccines include Measles-Mumps-Rubella (MMR) vaccine, diphtheria-tetanus-pertussis vaccine, varicella (chickenpox) vaccine, polio vaccine, and your yearly flu shot.
Hepatitis A (for some travelers)	The CDC recommends this vaccine because you can get hepatitis A through contaminated food or water in Malaysia, regardless of where you are eating or staying.
Typhoid (for most travelers)	You can get typhoid through contaminated food or water in Malaysia. The CDC recommends this vaccine for most travelers, especially if you are staying with friends or relatives, visiting smaller cities or rural areas, or if you are an adventurous eater. If you were not completely vaccinated as a child or do not know your vaccination status, talk to your doctor about getting vaccinated.
Hepatitis B (for some travelers)	You can get hepatitis B through sexual contact, contaminated needles, and blood products, so the CDC recommends this vaccine if you might have sex with a new partner, get a tattoo or piercing, or have any medical procedures.
Japanese Encephalitis (for some travelers)	You may need this vaccine if your trip will last more than a month, depending on where you are going in Malaysia and what time of year you are traveling. You should also consider this vaccine if you plan to visit rural areas in Malaysia or will be spending a lot of time outdoors, even for trips shorter than a month. Your doctor can help you decide if this vaccine is right for you based on your travel plans.
Malaria (some travelers)	When traveling in Malaysia, you should avoid mosquito bites to prevent malaria. You may need to take prescription medicine before, during, and after your trip to prevent malaria, depending on your travel plans, such as where you are going, when you are traveling, and if you are spending a lot of time outdoors or sleeping outside. Talk to your doctor about how you can prevent malaria while traveling.
Rabies (for some travelers)	Although rabies can be found in dogs, bats, and other mammals in Malaysia, it is not a major risk to most travelers. The CDC recommends this vaccine for the following groups: <ul style="list-style-type: none"> • Travelers involved in outdoor and other activities that put them at risk for animal bites. • People who will be working with or around animals. • People who are taking long trips or moving to Malaysia. • Children, because they tend to play with animals, might not report bites, and are more likely to have animal bites on their head and neck.
Yellow Fever	There is no risk of yellow fever in Malaysia. The Government of Malaysia requires proof of yellow fever vaccination only if you are arriving from a country with risk of yellow fever. This does not include the U.S. If you are traveling from a country other than the U.S, check this list to see if you may be required to get the yellow fever vaccine.

Table 5: CDC, Travel Health Information for Malaysia

- Use permethrin-treated clothing and gear (such as boots, pants, socks, and tents). Do not use permethrin directly on skin.
- Stay and sleep in air-conditioned or screened rooms.
- Use a bed net if the area where you are sleeping is exposed to the outdoors.

For protection against ticks and mosquitoes:
Use a repellent that contains 20 percent or more DEET for protection that lasts up to several hours.

For protection against mosquitoes only:
Products with one of the following active ingredients can also help prevent mosquito bites. Higher percentages of active ingredient provide longer protection.

- DEET
- Picaridin (also known as KBR 3023, Bayrepel, and Icaridin)
- Oil of lemon eucalyptus (OLE) or PMD
- IR3535

If you are bitten by bugs:

- Avoid scratching bug bites, and apply hydrocortisone cream or calamine lotion to reduce the itching.
- Check your entire body for ticks after outdoor activity. Be sure to remove ticks properly.
- Note: The Zika Virus is a risk in Malaysia.

Safety and Security

As a first step in planning any trip abroad, check the Travel Advisories for your intended destination. You can see the world at a glance on our color-coded map.

Note that conditions can change rapidly in a country at any time. To receive updated Travel Advisories and Alerts for the countries you choose, sign up at step.state.gov.

Sendai Framework

The Sendai Framework is the global blueprint and fifteen-year plan to build the world's resilience to natural disasters.²⁷² The Sendai Framework for Disaster Risk Reduction 2015-2030 outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks:

The Seven Global Targets include:

- Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality rates in the decade 2020-2030 compared to the period 2005-2015.
- Substantially reduce the number of affected people globally by 2030, aiming to lower average global figure per 100,000 in the decade 2020 -2030 compared to the period 2005-2015.
- Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030.
- Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.
- Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.
- Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework by 2030.
- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.²⁷³

The Four Priorities of Action include:

- Understanding disaster risk;
- Strengthening disaster risk governance to manage disaster risk;
- Investing in disaster reduction for resilience; and
- Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

The Sendai Framework aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries over the next 15 years. It was adopted at the Third United Nations World Conference on Disaster Risk Reduction in Sendai, Japan in 2015.²⁷⁴ The Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters.²⁷⁵ Figure 18 shows the Sendai DRR Framework.²⁷⁶

Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030

Scope and purpose

The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors

Expected outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

Goal

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster; increase preparedness for response and recovery, and thus strengthen resilience

Targets

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015	Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015	Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030	Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030	Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020	Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030	Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030
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Figure 18: UN Sendai Framework for Disaster Risk Reduction 2015-2030

Hyogo Framework for Action Country Progress Report

The Hyogo Framework for Action (HFA) was adopted as a guideline to reduce vulnerabilities to natural hazards. The HFA assists participating countries to become more resilient and to better manage the hazards that threaten their development. The levels of progress of the 2013-2015 results of the HFA for Malaysia are represented in Figure 19 and Table 6. Table 7 provides an overview of the overall challenges and the future outlook statement from the HFA report. The 2013-2015 is the most recent HFA report available for Malaysia.

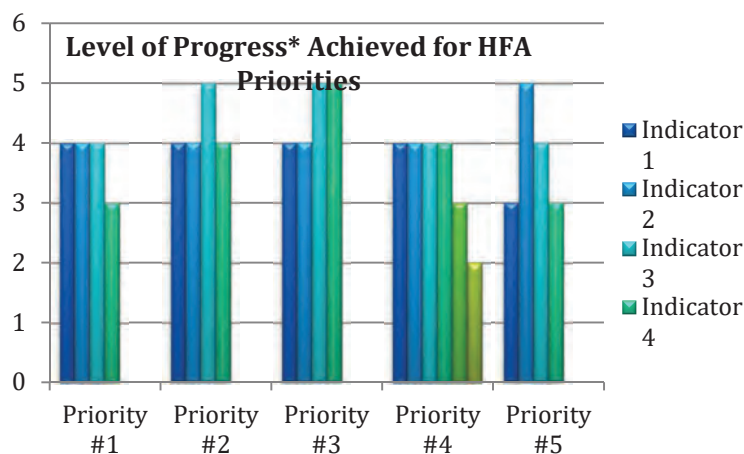


Figure 19: HFA Level of Progress Achieved

Priority for Action #1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.		
Core Indicator*	Indicator Description	Level of Progress Achieved
1	National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels.	4
2	Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels.	4
3	Community Participation and decentralization is ensured through the delegation of authority and resources to local levels.	4
4	A national multi sectoral platform for disaster risk reduction is functioning.	3

Priority #2: Identify, assess and monitor disaster risks and enhance early warning		
Core Indicator*	Indicator Description	Level of Progress Achieved
1	National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.	4
2	Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities.	4
3	Early warning systems are in place for all major hazards, with outreach to communities.	5
4	National and local risk assessments take account of regional / trans-boundary risks, with a view to regional cooperation on risk reduction.	4

Table 6: National Progress Report on the Implementation of the HFA for Malaysia

Priority #3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels

Core Indicator*	Indicator Description	Level of Progress Achieved
1	Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems, etc.).	4
2	School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.	4
3	Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.	5
4	Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.	5

Priority #4: Reduce the underlying risk factors

Core Indicator*	Indicator Description	Level of Progress Achieved
1	Disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management and adaptation to climate change.	4
2	Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.	4
3	Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities.	4
4	Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.	4
5	Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes.	3
6	Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.	2

Priority #5: Strengthen disaster preparedness for effective response at all levels

Core Indicator*	Indicator Description	Level of Progress Achieved
1	Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.	3
2	Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programs.	5
3	Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.	4
4	Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews.	3

Table Notes:

*Level of Progress:

- 1 – Minor progress with few signs of forward action in plans or policy
- 2 – Some progress, but without systematic policy and/ or institutional commitment
- 3 – Institutional commitment attained, but achievements are neither comprehensive nor substantial
- 4 – Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/ or operational capacities
- 5 – Comprehensive achievement with sustained commitment and capacities at all levels

Table 6: National Progress Report on the Implementation of the HFA for Malaysia (cont.)

Future Outlook Area 1: The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.

Challenges:	DRR is yet the main priority within national, state and local concerns as well as the existing disaster mechanism approach, which emphasizes more on response and post-disaster relief and recovery. There are other issues that compete for human and financial resources necessary for the DRR initiatives.
Future Outlook Priorities:	A national policy for disaster management, once developed will enable greater integration of disaster risk consideration in relevant plans, policies and programs at all levels. The formulation process itself will be an opportunity for awareness-raising and capacity building for involved stakeholder. Currently, the National Policy on Climate Change will provide the opportunity to mainstream and integrate DRR through climate change adaptation responses as envisaged in the Policy.

Future Outlook Area 2: The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.

Challenges:	The awareness and capacity of key agencies and other stakeholders needs to be strengthened to encompass the whole spectrum of disaster management.
Future Outlook Priorities:	A national platform on disaster management will be established during the Tenth Malaysia Plan to improve effectiveness in multi-stakeholder mobilization and drive more proactive and comprehensive multi-hazard approach in identifying, preventing, mitigating and preparing for the disaster risks.

Future Outlook Area 3: The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programs in the reconstruction of affected communities.

Challenges:	Scarcity of resources among local authorities for DRR programs needs to be addressed.
Future Outlook Priorities:	The National Security Council is in the process of reviewing the NSC Directive No.20: “National Policy and Mechanism on Disaster Management and Relief” to include DRR considerations and functions at the national, state and local levels.

Table 7: HFA Country Progress Report Future Outlook Areas, Malaysia

Country Profile

The information in the Country Profile section is sourced directly from the CIA World Fact book. Additional numbers on country comparison to the world can be found by going directly to the CIA website.²⁷⁷ Additional sources in this section cited in Endnotes.

Background:

This entry usually highlights major historic events and current issues and may include a statement about one or two key future trends. During the late 18th and 19th centuries, Great Britain established colonies and protectorates in the area of current Malaysia; these were occupied by Japan from 1942 to 1945. In 1948, the British-ruled territories on the Malay Peninsula except Singapore formed the Federation of Malaya, which became independent in 1957. Malaysia was formed in 1963 when the former British colonies of Singapore, as well as Sabah and Sarawak on the northern coast of Borneo, joined the Federation. The first several years of the country's independence were marred by a communist insurgency, Indonesian confrontation with Malaysia, Philippine claims to Sabah, and Singapore's withdrawal in 1965. During the 22-year term of Prime Minister Mahathir bin Mohamad (1981-2003), Malaysia was successful in diversifying its economy from dependence on exports of raw materials to the development of manufacturing, services, and tourism. Prime Minister MAHATHIR and a newly-formed coalition of opposition parties defeated Prime Minister Mohamed Najib bin Abdul Razak in May 2018, ending over 60 years of uninterrupted rule by Najib's party.

Location:

Southeastern Asia, peninsula bordering Thailand and northern one-third of the island of Borneo, bordering Indonesia, Brunei, and the South China Sea, south of Vietnam

Geographic Coordinates:

2 30 N, 112 30 E

Map References:

Southeast Asia

Area:

Total: 329,847 sq km

Land: 328,657 sq km

Water: 1,190 sq km

Country comparison to the world: 68

Area - comparative:

Slightly larger than New Mexico

Land boundaries:

Total: 2,742 km

Border countries (3): Brunei 266 km, Indonesia 1881 km, Thailand 595 km

Coastline:

4,675 km (Peninsular Malaysia 2,068 km, East Malaysia 2,607 km)

Maritime claims:

Territorial sea: 12 nm

Exclusive economic zone: 200 nm

Continental shelf: 200-m depth or to the depth of exploitation; specified boundary in the South China Sea

Climate:

Tropical; annual southwest (April to October) and northeast (October to February) monsoons

Terrain:

Coastal plains rising to hills and mountains

Elevation:

Mean elevation: 419 m

Lowest point: Indian Ocean 0 m

Highest point: Gunung Kinabalu 4,095 m

Natural resources:

Tin, petroleum, timber, copper, iron ore, natural gas, bauxite

Land use:

Agricultural land: 23.2% (2011 est.)

Arable land: 2.9% (2011 est.) / permanent crops: 19.4% (2011 est.) / permanent pasture: 0.9% (2011 est.)

Forest: 62% (2011 est.)

Other: 14.8% (2011 est.)

Irrigated land:
3,800 sq km (2012)

Population distribution:

A highly uneven distribution with over 80% of the population residing on the Malay Peninsula

Natural hazards:

Flooding; landslides; forest fires

Environment - current issues:

air pollution from industrial and vehicular emissions; water pollution from raw sewage; deforestation; smoke/haze from Indonesian forest fires; endangered species; coastal reclamation damaging mangroves and turtle nesting sites

Environment - international agreements:

Party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands
Signed, but not ratified: none of the selected agreements

Geography:

Geography - note:

Strategic location along Strait of Malacca and southern South China Sea

People and Society:

Population:

31,809,660 (July 2018 est.)

Country comparison to the world: 42

Nationality:

Noun: Malaysian(s)

Adjective: Malaysian

Ethnic groups:

Bumiputera 62% (Malays and indigenous peoples, including Orang Asli, Dayak, Anak Negeri), Chinese 20.6%, Indian 5.7%, other 0.8%, non-citizens 10.3% (2017 est.)

Languages:

Bahasa Malaysia (official), English, Chinese (Cantonese, Mandarin, Hokkien, Hakka, Hainan, Foochow), Tamil, Telugu, Malayalam, Panjabi, Thai

Note: Malaysia has 134 living languages - 112 indigenous languages and 22 non-indigenous languages; in East Malaysia, there are several indigenous languages; the most widely spoken are Iban and Kadazan

Religions:

Muslim (official) 61.3%, Buddhist 19.8%, Christian 9.2%, Hindu 6.3%, Confucianism, Taoism, other traditional Chinese religions 1.3%, other 0.4%, none 0.8%, unspecified 1% (2010 est.)

Age structure:

0-14 years: 27.48% (male 4,498,796 /female 4,243,418)

15-24 years: 16.74% (male 2,704,318 /female 2,621,444)

25-54 years: 40.97% (male 6,587,529 /female 6,444,430)

55-64 years: 8.46% (male 1,364,858 /female 1,325,595)

65 years and over: 6.35% (male 957,841 /female 1,061,431) (2018 est.)

Dependency ratios:

Total dependency ratio: 44.6 (2015 est.)

Youth dependency ratio: 36.1 (2015 est.)

Elderly dependency ratio: 8.5 (2015 est.)

Potential support ratio: 11.8 (2015 est.)

Median age:

Total: 28.7 years

Male: 28.4 years

Female: 29 years (2018 est.)

Country comparison to the world: 130

Population growth rate:

1.34% (2018 est.)

Country comparison to the world: 82

Birth rate:

18.8 births/1,000 population (2018 est.)

Country comparison to the world: 87

Death rate:

5.2 deaths/1,000 population (2018 est.)

Country comparison to the world: 190

Net migration rate:

-0.3 migrant(s)/1,000 population (2018 est.)

Country comparison to the world: 117

Population distribution:

A highly uneven distribution with over 80% of the population residing on the Malay Peninsula

Urbanization:

Urban population: 76% of total population (2018)

Rate of urbanization: 2.13% annual rate of change (2015-20 est.)

Major urban areas - population:

7.564 million Kuala Lumpur (capital), 983,000 Johor Bahru, 786,000 Ipoh (2018)

Sex ratio:

At birth: 1.07 male(s)/female

0-14 years: 1.06 male(s)/female

15-24 years: 1.03 male(s)/female

25-54 years: 1.02 male(s)/female

55-64 years: 1.03 male(s)/female

65 years and over: 0.9 male(s)/female

Total population: 1.03 male(s)/female (2018 est.)

Maternal mortality rate:

40 deaths/100,000 live births (2015 est.)

Country comparison to the world: 105

Infant mortality rate:

Total: 12.1 deaths/1,000 live births

Male: 14 deaths/1,000 live births

Female: 10.1 deaths/1,000 live births (2018 est.)

Country comparison to the world: 112

Life expectancy at birth:

Total population: 75.4 years

Male: 72.6 years

Female: 78.4 years (2018 est.)

Country comparison to the world: 107

Total fertility rate:

2.48 children born/woman (2018 est.)

Country comparison to the world: 78

Contraceptive prevalence rate:

52.2% (2014)

Health expenditures:

4.2% of GDP (2014)

Country comparison to the world: 163

Physicians density:

1.53 physicians/1,000 population (2015)

Hospital bed density:

1.9 beds/1,000 population (2015)

Drinking water source:

Improved: urban: 100% of population

Rural: 93% of population

Total: 98.2% of population

Unimproved: urban: 0% of population

Rural: 7% of population

Total: 1.8% of population (2015 est.)

Sanitation facility access:

Improved: urban: 96.1% of population (2015 est.)

Rural: 95.9% of population (2015 est.)

Total: 96% of population (2015 est.)

Unimproved: urban: 3.9% of population (2015 est.)

Rural: 4.1% of population (2015 est.)

Total: 4% of population (2015 est.)

HIV/AIDS - adult prevalence rate:

0.4% (2017 est.)

Country comparison to the world: 75

HIV/AIDS - people living with HIV/AIDS:

87,000 (2017 est.)

Country comparison to the world: 47

HIV/AIDS - deaths:

4,400 (2017 est.)

Country comparison to the world: 33

Major infectious diseases:

Degree of risk: intermediate (2016)

Food or waterborne diseases: bacterial diarrhea (2016)

Vectorborne diseases: dengue fever (2016)

Water contact diseases: leptospirosis (2016)

Obesity - adult prevalence rate:

15.6% (2016)

Country comparison to the world: 125

Children under the age of 5 years underweight:

13.7% (2016)

Country comparison to the world: 47

Education expenditures:

4.7% of GDP (2017)

Country comparison to the world: 80

Literacy:

Definition: age 15 and over can read and write (2015 est.)

Total population: 94.6%

Male: 96.2%

Female: 93.2% (2015 est.)

School life expectancy (primary to tertiary education):

Total: 13 years

Male: 13 years

Female: 14 years (2017)

Unemployment, youth ages 15-24:

Total: 10.5%

Male: 9.8%

Female: 11.4% (2016 est.)

Country comparison to the world: 123

Government:**Country name:**

Conventional long form: none

Conventional short form: Malaysia

Local long form: none

Local short form: Malaysia

Former: Federation of Malaya

Etymology: the name means "Land of the Malays"

Government type:

Federal parliamentary constitutional monarchy
note: all Peninsular Malaysian states have hereditary rulers (commonly referred to as sultans) except Melaka (Malacca) and Pulau Pinang (Penang); those two states along with Sabah and Sarawak in East Malaysia have governors appointed by government; powers of state governments are limited by the federal constitution; under terms of federation, Sabah and Sarawak retain certain constitutional prerogatives (e.g., right to maintain their own immigration controls)

Capital:

Name: Kuala Lumpur; note - nearby Putrajaya is referred to as a federal government administrative center but not the capital; Parliament meets in Kuala Lumpur

Geographic coordinates:

3 10 N, 101 42 E

Time difference: UTC+8 (13 hours ahead of Washington, DC, during Standard Time)

Administrative divisions:

13 states (negeri-negeri, singular - negeri); Johor, Kedah, Kelantan, Melaka, Negeri

Sembilan, Pahang, Perak, Perlis, Pulau Pinang, Sabah, Sarawak, Selangor, Terengganu; and 1 federal territory (Wilayah Persekutuan) with 3 components, Kuala Lumpur, Labuan, and Putrajaya

Independence:

31 August 1957 (from the UK)

National holiday:

Independence Day (or Merdeka Day), 31 August (1957) (independence of Malaya); Malaysia Day, 16 September (1963) (formation of Malaysia)

Constitution:

History: previous 1948; latest drafted 21 February 1957, effective 27 August 1957
amendments: proposed as a "bill" by Parliament; passage requires at least two-thirds majority vote by the Parliament membership in the bill's second and third readings; a number of constitutional sections are excluded from amendment or repeal; amended many times, last in 2010 (2017)

Legal system:

Mixed legal system of English common law, Islamic law, and customary law; judicial review of legislative acts in the Federal Court at request of supreme head of the federation

International law organization participation:

Has not submitted an ICJ jurisdiction declaration; non-party state to the ICCt

Citizenship:

Citizenship by birth: no

Citizenship by descent only: at least one parent must be a citizen of Malaysia

Dual citizenship recognized: no

Residency requirement for naturalization: 10 out of 12 years preceding application

Suffrage:**Executive branch:**

Chief of state: King Sultan ABDULLAH Sultan Ahmad Shah (since 24 January 2019); note - King MUHAMMAD V (formerly known as Tuanku Muhammad Faris Petra) (selected on 14 October 2016; installed on 13 December 2016) resigned

on 6 January 2019; the position of the king is primarily ceremonial, but he is the final arbiter on the appointment of the prime minister

Head of government: Prime Minister MAHATHIR bin Mohamad (since 10 May 2018); Deputy Prime Minister WAN AZIZAH Wan Ismail (since 21 May 2018) The Deputy Prime Minister is also responsible for the country's disaster management.²⁷⁸

Cabinet: Cabinet appointed by the prime minister from among members of Parliament with the consent of the king
Elections/appointments: king elected by and from the hereditary rulers of 9 states for a 5-year term; election is on a rotational basis among rulers of the 9 states; election last held on 24 January 2019 (next to be held in 2024); prime minister designated from among members of the House of Representatives; following legislative elections, the leader who commands support of the majority of members in the House becomes prime minister

Legislative branch:

Description: bicameral Parliament or Parlimen consists of:
Senate or Dewan Negara (70 seats; 44 members appointed by the king and 26 indirectly elected by 13 state legislatures; members serve 3-year terms)

House of Representatives or Dewan Rakyat (222 seats; members directly elected in single-seat constituencies by simple majority vote to serve 5-year terms)

Elections:

Senate - appointed
House of Representatives - last held on 9 May 2018 (next to be held no later than May 2023)

Election results:

Senate - appointed; composition - men 54, women 14, percent of women 20.6%
House of Representatives - percent of vote by party/coalition - PH 45.6%, BN 33.8%, PAS 16.9%, WARISAN 2.3%, other 1.4%; seats by party/coalition - PH 113, BN 79, PAS 18, WARISAN 8, STAR 1, independent 3; composition - men 199, women 23, percent of women 10.4%; note - total Parliament percent of women 12.8%

Judicial branch:

Highest courts: Federal Court (consists of the chief justice, president of the Court of Appeal, chief justice of the High Court of Malaya, chief judge of the High Court of Sabah and Sarawak, 8 judges, and 1 “additional” judge); note - Malaysia has a dual judicial hierarchy of civil and religious (sharia) courts

Judge selection and term of office: Federal Court justices appointed by the monarch on advice of the prime minister; judges serve until mandatory retirement at age 66 with the possibility of 6-month extensions

Subordinate courts: Court of Appeal; High Court; Sessions Court; Magistrates' Court

Political parties and leaders:

National Front (Barisan Nasional) or BN: Malaysian Chinese Association (Persatuan China Malaysia) or MCA [Liow Tiong Lai]
Malaysian Indian Congress (Kongres India Malaysia) or MIC [S. Subramaniam]
United Malays National Organization or UMNO [Mohamad Hasan, acting]

Coalition of Hope (Pakatan Harapan) or PH (formerly the People's Alliance):

Democratic Action Party (Parti Tindakan Demokratik) or DAP [Tan Kok Wai]
Malaysian United Indigenous Party (Parti Pribumi Bersatu Malaysia) or PPBM [Mahathir bin Mohamad]
National Trust Party (Parti Amanah Negara) or AMANAH [Mohamad Sabu]
People's Justice Party (Parti Keadilan Rakyat) or PKR [Anwar Ibrahim]

Other:

Homeland Solidarity Party or STAR [Jeffrey Katingan]
Pan-Malaysian Islamic Party (Parti Islam se Malaysia) or PAS [Abdul Hadi Awang]
Progressive Democratic Party or PDP [Tiong King Sing]
Sabah Heritage Party (Parti Warisan Sabah) or WARISAN [Shafie Apdal]
Sarawak Parties Alliance (Gabungan Parti Sarawak) or GPS [Abang Johari Openg] (includes PBB, SUPP, PRS, PDP)
Sarawak People's Party (Parti Rakyat Sarawak) or PRS [James Masing]
Sarawak United People's Party (Parti Bersatu Rakyat Sarawak) or SUPP [Dr. Sim Kui Hian]

United Pasokmomogun Kadazandusun Murut Organization (Pertubuhan Pasko Momogun Kadazan Dusun Bersatu) or UPKO [Wilfred Madius Tangau]

United Sabah Party (Parti Bersatu Sabah) or PBS [Maximus Ongkili]

United Sabah People's (Party Parti Bersatu Rakyat Sabah) or PBRS [Joseph Kurup]

United Traditional Bumiputera Party (Parti Pesaka Bumiputera Bersata) or PBB

International organization participation:

ADB, APEC, ARF, ASEAN, BIS, C, CICA (observer), CP, D-8, EAS, FAO, G-15, G-77, IAEA, IBRD, ICAO, ICC (national committees), ICRM, IDA, IDB, IFAD, IFC, IFRCs, IHO, ILO, IMF, IMO, IMSO, Interpol, IOC, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, MINURSO, MONUSCO, NAM, OIC, OPCW, PCA, PIF (partner), UN, UNAMID, UNCTAD, UNESCO, UNIDO, UNIFIL, UNISFA, UNMIL, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO

Diplomatic representation in the US:

Chief of mission: Ambassador AZMIL Mohd Azbidi (since 8 April 2019)
Chancery: 3516 International Court NW, Washington, DC 20008
Telephone: [1] (202) 572-9700
FAX: [1] (202) 572-9882
Consulate general: Los Angeles, New York

Diplomatic representation from the US:

Chief of mission: Ambassador Kamala Shirin LAKHDIR (since 21 February 2017)
Embassy: 376 Jalan Tun Razak, 50400 Kuala Lumpur

Mailing address: US Embassy Kuala Lumpur, APO AP 96535-8152
Telephone: [60] (3) 2168-5000
FAX: [60] (3) 2142-2207

Flag description:

14 equal horizontal stripes of red (top) alternating with white (bottom); there is a dark blue rectangle in the upper hoist-side corner bearing a yellow crescent and a yellow 14-pointed star; the flag is often referred to as Jalur Gemilang (Stripes of Glory); the 14 stripes stand for the equal status in the federation of the 13 member states and the federal government; the 14 points on the star represent the unity between these entities; the crescent is a traditional symbol of

Islam; blue symbolizes the unity of the Malay people and yellow is the royal color of Malay rulers

Note: the design is based on the flag of the US

National symbol(s):

Tiger, hibiscus; national colors: gold, black

National anthem:

Name: "Negaraku" (My Country)

Lyrics/music: collective, led by Tunku Abdul Rahman/Pierre Jean De Beranger

Note: adopted 1957; full version only performed in the presence of the king; the tune, which was adopted from a popular French melody titled "La Rosalie," was originally the anthem of Perak, one of Malaysia's 13 states

Economy - overview:

Malaysia, an upper middle-income country, has transformed itself since the 1970s from a producer of raw materials into a multi-sector economy. Under previous Prime Minister NAJIB, Malaysia is attempting to achieve high-income status by 2020 and to move further up the value-added production chain by attracting investments in high technology, knowledge-based industries and services. The Economic Transformation Program is a series of projects and policy measures intended to accelerate the country's economic growth. The government has also taken steps to liberalize some services sub-sectors. Malaysia is vulnerable to a fall in world commodity prices or a general slowdown in global economic activity.

The Government is continuing efforts to boost domestic demand and reduce the economy's dependence on exports. Domestic demand continues to anchor economic growth, supported mainly by private consumption, which accounts for 57% of GDP in 2018.²⁷⁹ Nevertheless, exports - particularly of electronics, oil and gas, and palm oil - remain a significant driver of the economy. In 2015, gross exports of goods and services were equivalent to 73% of GDP. The oil and gas sector supplied about 22% of government revenue in 2015, down significantly from prior years amid a decline in commodity prices and diversification of government revenues. Malaysia has embarked on a fiscal reform program aimed at achieving a balanced budget by 2020, including rationalization of subsidies and the 2015 introduction of a 6% value added tax. Sustained

low commodity prices throughout the period not only strained government finances, but also shrunk Malaysia's current account surplus and weighed heavily on the Malaysian ringgit, which was among the region's worst performing currencies during 2013-17. The ringgit hit new lows following the US presidential election amid a broader selloff of emerging market assets. Bank Negara Malaysia (the central bank) maintains adequate foreign exchange reserves; a well-developed regulatory regime has limited Malaysia's exposure to riskier financial instruments, although it remains vulnerable to volatile global capital flows. In order to increase Malaysia's competitiveness, Prime Minister NAJIB raised possible revisions to the special economic and social preferences accorded to ethnic Malays under the New Economic Policy of 1970, but retreated in 2013 after he encountered significant opposition from Malay nationalists and other vested interests. In September 2013 NAJIB launched the new Bumiputra Economic Empowerment Program, policies that favor and advance the economic condition of ethnic Malays.

Malaysia signed the 12-nation Trans-Pacific Partnership (TPP) free trade agreement in February 2016, although the future of the TPP remains unclear following the US withdrawal from the agreement. Along with nine other ASEAN members, Malaysia established the ASEAN Economic Community in 2015, which aims to advance regional economic integration.

GDP (purchasing power parity):²⁸⁰

\$999.4 billion (2018)

\$933.3 billion (2017)

\$864.9 billion (2016)

Country comparison to the world: 26

GDP (official exchange rate):²⁸¹

\$358.6 billion (2018 est.)

GDP - real growth rate:

4.3-4.8% (2019 est.)

4.7% (2018)

5.7% (2017 est.)

4.4% (2016 est.)

Country comparison to the world: 37

GDP - per capita (PPP):²⁸²

\$31,698 (2018)

\$30,004 (2017)

\$28,186 (2016)

Country comparison to the world: 71

Gross national saving:²⁸³

25.1% of GDP (2019 est.)

25.7% of GDP (2018)

28.4% of GDP (2017)

28.4% of GDP (2016)

Country comparison to the world: 38

GDP - composition, by end use:²⁸⁴

Household consumption: 56.5% (2019 est.)

Government consumption: 12.4% (2019 est.)

Investment in fixed capital: 23.8% (2019 est.)

Investment in inventories: 0.7% (2019 est.)

Exports of goods and services: 67.4% (2019 est.)

Imports of goods and services: 59.4% (2019 est.)

GDP - composition, by sector of origin:²⁸⁵

Agriculture: 7.6% (2019 est.)

Manufacturing 23.1% (2019 est.)

Services: 56.1% (2019 est.)

Agriculture - products:

Peninsular Malaysia - palm oil, rubber, cocoa, rice; Sabah - palm oil, subsistence crops; rubber, timber; Sarawak - palm oil, rubber, timber; pepper

Industries:

Peninsular Malaysia - rubber and oil palm processing and manufacturing, petroleum and natural gas, light manufacturing, pharmaceuticals, medical technology, electronics and semiconductors, timber processing; Sabah - logging, petroleum and natural gas production; Sarawak - agriculture processing, petroleum and natural gas production, logging

Industrial production growth rate:

5% (2017 est.)

Country comparison to the world: 55

Labor force:

14.94 million (2017 est.)

Country comparison to the world: 39

Labor force - by occupation:

Agriculture: 11%

Industry: 36%

Services: 53% (2012 est.)

Unemployment rate:

3.4% (2017 est.)

3.5% (2016 est.)

Country comparison to the world: 41

Population below poverty line:

3.8% (2009 est.)

Household income or consumption by percentage share:

Lowest 10%: 1.8%

Highest 10%: 34.7% (2009 est.)

Distribution of family income - Gini index:

46.2 (2009)

49.2 (1997)

Country comparison to the world: 32

Budget:

Revenues: 51.25 billion (2017 est.)

Expenditures: 60.63 billion (2017 est.)

Taxes and other revenues:

16.4% (of GDP) (2017 est.)

Country comparison to the world: 180

Budget surplus (+) or deficit (-):

-3% (of GDP) (2017 est.)

Country comparison to the world: 133

Public debt:²⁸⁶

50.1% of GDP (2017)

51.9% of GDP (2016)

note: this figure is based on the amount of federal government debt, MYR501.6 billion (\$167.2 billion) in 2012; this includes Malaysian Treasury bills and other government securities, as well as loans raised externally and bonds and notes issued overseas; this figure excludes debt issued by non-financial public enterprises and guaranteed by the federal government, which was an additional \$47.7 billion in 2012

Country comparison to the world: 86

Fiscal year:

Calendar year

Inflation rate (consumer prices):²⁸⁷

1.0% (2018)

3.7% (2017)

2.1% (2016)

Note: approximately 30% of goods are price-controlled

Country comparison to the world: 151

Central bank discount rate:

3% (31 December 2011)

2.83% (31 December 2010)

Country comparison to the world: 111

Commercial bank prime lending rate:

4.61% (31 December 2017 est.)

4.52% (31 December 2016 est.)

Country comparison to the world: 155

Stock of narrow money:

\$107.5 billion (31 December 2017 est.)

\$84.9 billion (31 December 2016 est.)

Country comparison to the world: 37

Stock of broad money:

\$107.5 billion (31 December 2017 est.)

\$84.9 billion (31 December 2016 est.)

Country comparison to the world: 37

Stock of domestic credit:

\$482.7 billion (31 December 2017 est.)

\$398.3 billion (31 December 2016 est.)

Country comparison to the world: 26

Market value of publicly traded shares:

\$383 billion (31 December 2015 est.)

\$459 billion (31 December 2014 est.)

\$500.4 billion (31 December 2013 est.)

Country comparison to the world: 27

Current account balance:²⁸⁸

\$6.811 billion (2019 est.)

\$7.580 billion (2018)

Country comparison to the world: 24

Exports:²⁸⁹

\$251.1 billion (2019 est.)

\$247.4 billion (2018)

Country comparison to the world: 28

Exports - partners:²⁹⁰

Singapore 13.9%, China 13.9%, U.S. 9.1%, Hong Kong 7.5%, Japan 6.9%, Thailand 5.7% (2019)

Exports - commodities:

Electrical and electronic products, petroleum products, chemicals and chemical products, palm oil and palm oil based agriculture products, LNG, manufactures of metal, machinery, equipment and parts, optical and scientific equipment, and crude petroleum.

Imports:²⁹¹

\$223.1 billion (2019 est)

\$217.5 billion (2018)

Country comparison to the world: 27

Imports - commodities:²⁹²

Electrical and electric products, chemicals and chemical products, petroleum products, machinery, equipment and arts, transport equipment, manufactures of metal, iron and steel products, other agriculture, crude petroleum, and optical and scientific equipment.

Imports - partners:²⁹³

China 20.4%, Singapore 10.3%, US 8.0%, Japan 7.2%, Taiwan 6.9%, Thailand 5.5%, Indonesia 4.5% (2018)

Reserves of foreign exchange and gold:

\$102.7 billion (28 June 2019)

\$101.4 billion (31 Dec 2018)

\$102.4 billion (31 Dec 2017)

Country comparison to the world: 25

Debt - external:

\$217.2 billion (31 December 2017 est.)

\$195.3 billion (31 December 2016 est.)

Country comparison to the world: 33

Stock of direct foreign investment - at home:²⁹⁴

\$162.5 billion (Q1 2019)

\$156.4 billion (2018)

Country comparison to the world: 39

Stock of direct foreign investment - abroad:²⁹⁵

\$119.2 billion (Q1 2019)

\$121.9 billion (2018)

Country comparison to the world: 31

Exchange rates:²⁹⁶

Ringgits (MYR) per US dollar -

4.0620 (2017)

4.4860 (2016)

4.2920 (2015)

3.495 (2014)

3.2815 (2013)

Electricity access:

Population without electricity: 100,000 (2013)

Electrification - total population: 99.5% (2013)

Electrification - urban areas: 99.8% (2013)

Electrification - rural areas: 98.7% (2013)

Electricity - production:

148.3 billion kWh (2016 est.)

Country comparison to the world: 28

Electricity - consumption:

136.9 billion kWh (2016 est.)

Country comparison to the world: 26

Electricity - exports:

3 million kWh (2015 est.)

Country comparison to the world: 93

Electricity - imports:

33 million kWh (2016 est.)

Country comparison to the world: 109

Electricity - installed generating capacity:

33 million kW (2016 est.)

Country comparison to the world: 31

Electricity - from fossil fuels:

78% of total installed capacity (2016 est.)

Country comparison to the world: 90

Electricity - from nuclear fuels:

0% of total installed capacity (2017 est.)

Country comparison to the world: 136

Electricity - from hydroelectric plants:

18% of total installed capacity (2017 est.)

Country comparison to the world: 95

Electricity - from other renewable sources:

4% of total installed capacity (2017 est.)

Country comparison to the world: 113

Crude oil - production:

647,900 bbl/day (2017 est.)

Country comparison to the world: 26

Crude oil - exports:²⁹⁷

271,414 bbl/day (Jan-May 2019)

343,733 bbl/day (2018)

Country comparison to the world: 24

Crude oil - imports: n/a

Country comparison to the world: 35

Crude oil - proved reserves:

3.6 billion bbl (1 January 2018 est.)

Country comparison to the world: 27

Refined petroleum products - production:²⁹⁸

646,612 bbl/day (2018)

Country comparison to the world: 32

Refined petroleum products - consumption:

704,000 bbl/day (2016 est.)

Country comparison to the world: 28

Refined petroleum products - exports:²⁹⁹

559,585 bbl/day (Jan-May 2019)

613,536 bbl/day (2018)

Country comparison to the world: 31

Refined petroleum products - imports:³⁰⁰ n/a

Country comparison to the world: 24

Natural gas - production:

69.49 billion cu m (2017 est.)

Country comparison to the world: 13

Natural gas - consumption:

30.44 billion cu m (2017 est.)

Country comparison to the world: 31

Natural gas - exports:³⁰¹

29.06 billion cu m (Jan-May 2019)

66.37 billion cu m (2018)

Country comparison to the world: 9

Natural gas - imports:³⁰² n/a

Country comparison to the world: 45

Natural gas - proved reserves:

1.183 trillion cu m (1 January 2018 est.)

Country comparison to the world: 23

Carbon dioxide emissions from consumption of energy:

226.8 million Mt (2017 est.)

Country comparison to the world: 31

Communications:

Telephones - fixed lines:

Total subscriptions: 6,578,200 (2017 est.)

Subscriptions per 100 inhabitants: 21 (2017 est.)

Country comparison to the world: 25

Telephones - mobile cellular:

Total subscriptions: 42,338,500 (2017 est.)

Subscriptions per 100 inhabitants: 135 (2017 est.)

Country comparison to the world: 34

Telephone system:

General assessment: modern system featuring good intercity services mainly by microwave radio relay and an adequate intercity microwave radio relay network between Sabah and Sarawak via Brunei; international service excellent; one of the most advanced telecom networks; roll-out of a national broadband network

Domestic: fixed-line 21 per 100 and mobile-cellular teledensity exceeds 135 per 100 persons; domestic satellite system with 2 earth stations

International:

Country code - 60; landing point for several major international submarine cable networks that provide connectivity to Asia, Middle East, and Europe; satellite earth stations - 2 Intelsat (1 Indian Ocean, 1 Pacific Ocean)

Broadcast media:

State-owned TV broadcaster operates 2 TV networks with relays throughout the country, and the leading private commercial media group operates 4 TV stations with numerous relays throughout the country; satellite TV subscription service is available; state-owned radio broadcaster operates multiple national networks, as well as regional and local stations; many private commercial radio broadcasters and some subscription satellite radio services are available; about 55 radio stations overall (2012)

Internet country code:

.my

Internet users:

Total: 24,384,952 (July 2016 est.)

Percent of population: 78.8% (July 2016 est.)

Country comparison to the world: 29

Broadband - fixed subscriptions:

Total: 2,687,800 (2017 est.)

Subscriptions per 100 inhabitants: 9 (2017 est.)

Country comparison to the world: 42

Transportation:**National air transport system:**

Number of registered air carriers: 12 (2015)

Inventory of registered aircraft operated by air carriers: 263 (2015)

Annual passenger traffic on registered air carriers: 50,347,149 (2015)

Annual freight traffic on registered air carriers: 2,005,979,379 mt-km (2015)

Civil aircraft registration country code prefix: 9M (2016)

Airports:

114 (2013)

Country comparison to the world: 51

Airports - with paved runways:

Total: 39 (2017)

Over 3,047 m: 8 (2017)

2,438 to 3,047 m: 8 (2017)

1,524 to 2,437 m: 7 (2017)

914 to 1,523 m: 8 (2017)

Under 914 m: 8 (2017)

Airports - with unpaved runways:

Total: 75 (2013)

914 to 1,523 m: 6 (2013)

Under 914 m: 69 (2013)

Heliports:

4 (2013)

Pipelines:

354 km condensate, 6439 km gas, 155 km liquid petroleum gas, 1937 km oil, 43 km oil/gas/water, 114 km refined products, 26 km water (2013)

Railways:

Total: 1,851 km (2014)

Standard gauge: 59 km 1.435-m gauge (59 km electrified) (2014)

Narrow gauge: 1,792 km 1.000-m gauge (339 km electrified) (2014)

Country comparison to the world: 77

Roadways:

Total: 144,403 km (excludes local roads) (2010)

Paved: 116,169 km (includes 1,821 km of expressways) (2010)

Unpaved: 28,234 km (2010)

Country comparison to the world: 30

Waterways:

7,200 km (Peninsular Malaysia 3,200 km; Sabah

1,500 km; Sarawak 2,500 km) (2011)
country comparison to the world: 19

Merchant marine:

Total: 1,704

By type: bulk carrier 15, container ship 22, general cargo 182, oil tanker 137, other 1348 (2018)

Country comparison to the world: 15

Ports and terminals:

Major seaport(s): Bintulu, Johor Bahru, George Town (Penang), Port Kelang (Port Klang), Tanjung Pelepas

Container_port (TEUs): George Town (Penang) (1,437,120), Port Kelang (Port Klang) (13,169,577), Tanjung Pelepas (8,280,661) (2016)

LNG terminal(s) (export): Bintulu (Sarawak)

LNG terminal(s) (import): Sungei Udang

Military and Security:

Military expenditures:

1.11% of GDP (2017)

1.41% of GDP (2016)

1.53% of GDP (2015)

1.46% of GDP (2014)

1.52% of GDP (2013)

Country comparison to the world: 107

Military branches:

Malaysian Armed Forces (Angkatan Tentera Malaysia, ATM): Malaysian Army (Tentera Darat Malaysia), Royal Malaysian Navy (Tentera Laut Diraja Malaysia, TLDM), Royal Malaysian Air Force (Tentera Udara Diraja Malaysia, TUDM) (2013)

Military service age and obligation:

17 years 6 months of age for voluntary military service (younger with parental consent and proof of age); mandatory retirement age 60;

women serve in the Malaysian Armed Forces; no conscription (2013)

Maritime threats:

The International Maritime Bureau reports that the territorial and offshore waters in the Strait of Malacca and South China Sea remain high risk for piracy and armed robbery against ships; in the past, commercial vessels have been attacked and hijacked both at anchor and while underway; hijacked vessels are often disguised and cargo diverted to ports in East Asia; crews have been murdered or cast adrift; seven attacks were reported in 2017 including four ships boarded, two hijacked, and 32 crew taken hostage

Terrorism:

Terrorist groups - foreign based:

Jemaah Islamiyah (JI):
Aim(s): enhance networks in Malaysia and, ultimately, overthrow the secular Malaysian Government and establish a pan-Islamic state across Southeast Asia

Area(s) of operation: maintains a recruitment and operational presence, primarily in major cities (April 2018)

Transnational Issues:

Disputes - international:

While the 2002 “Declaration on the Conduct of Parties in the South China Sea” has eased tensions over the Spratly Islands, it is not the legally binding “code of conduct” sought by some parties; Malaysia was not party to the March 2005 joint accord among the national oil companies of China, the Philippines, and Vietnam on conducting marine seismic activities in the Spratly Islands; disputes continue over deliveries of fresh water to Singapore, Singapore’s land reclamation, bridge construction, and maritime boundaries in the Johor and Singapore Straits; in 2008, ICJ awarded sovereignty of Pedra Branca (Pulau Batu Puteh/Horsburgh Island) to Singapore, and Middle Rocks to Malaysia, but did not rule on maritime regimes, boundaries, or disposition of South Ledge; land and maritime negotiations with Indonesia are ongoing, and disputed areas include the controversial Tanjung Datu and Camar Wulan border area in Borneo and the maritime boundary in the Ambalat oil block in the Celebes Sea; separatist violence

in Thailand's predominantly Muslim southern provinces prompts measures to close and monitor border with Malaysia to stem terrorist activities; Philippines retains a dormant claim to Malaysia's Sabah State in northern Borneo; per Letters of Exchange signed in 2009, Malaysia in 2010 ceded two hydrocarbon concession blocks to Brunei in exchange for Brunei's sultan dropping claims to the Limbang corridor, which divides Brunei; piracy remains a problem in the Malacca Strait

Refugees and internally displaced persons:

Refugees (country of origin): 98,041 (Burma) (2017)

Stateless persons:

10,068 (2017); note - Malaysia's stateless population consists of Rohingya refugees from Burma, ethnic Indians, and the children of Filipino and Indonesian illegal migrants; Burma stripped the Rohingya of their nationality in 1982; Filipino and Indonesian children who have not been registered for birth certificates by their parents or who received birth certificates stamped "foreigner" are vulnerable to statelessness should they not be able to apply to their parents' country of origin for passports

Illicit drugs:

Drug trafficking prosecuted vigorously, including enforcement of the death penalty; heroin still primary drug of abuse, but synthetic drug demand remains strong; continued ecstasy and methamphetamine producer for domestic users and, to a lesser extent, the regional drug market.

Acronyms and Abbreviations

Acronym	Definition
AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ACTIP	ASEAN Convention Against Trafficking in Persons, Especially Women and Children
ADB	Asian Development Bank
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance on disaster management
ASEAN	Association of Southeast Asian Nations
ASSI	ASEAN Safe School Initiative
CAAM	Civil Aviation Authority Malaysia
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CFE-DM	The Center for Excellence in Disaster Management & Humanitarian Assistance
CIA	Central Intelligence Agency
CRED	The Centre for Research on the Epidemiology of Disasters
CREST	Collaborative Research in Engineering, Science and Technology (Malaysian research institute)
DMRC	Disaster Management Relief Committee
DDOCC	District Disaster Operation Control Center
DID	Department of Irrigation and Drainage
DM	Disaster Management
DMHA	Disaster Management and Humanitarian Assistance
DoD	Department of Defense
DOE	Department of Environment
DOS	U.S. Department of State
EEZ	Exclusive Economic Zone
FNDRT	Fund of National Disaster Relief Trust
FDMRC	Federal Disaster Management and Relief Committee
GHSA	Global Health Security Agenda
IFRC	International Federation of Red Cross and Red Crescent Society
INSARAG	International Search and Rescue Advisory Group
MCDF	Malaysia Civil Defence Force
MCP	Malayan Communist Party
MMEA	Malaysian Maritime Enforcement Agency
MMZ	Malaysia Maritime Zone
MOU	Memorandum of Understanding
MRC	Malaysian Red Crescent
MSRR	Malaysia Maritime Search and Rescue Region
MyNDS	Malaysian National Development Strategy
NADMA	Malaysia's National Disaster Management Agency
NAP	National Action Plan (to implement UN Security Council Resolution 1325)
NCD	Non-communicable disease
NDMRC	Natural Disaster Management and Relief Committee
NGO	Non-Governmental Organizations

Acronym	Definition
NSC	National Security Council
RTU	Remote Telemetry Unit
SAR	Search and Rescue
SASOP	ASEAN Standard Operating Procedures for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations
SCR	Security Council Resolution, United Nations
SDOCC	State Disaster Operation Control Center
SMART	Special Malaysia Disaster Assistance and Rescue Team
SME	Subject Matter Experts
SOP	Standard Operating Procedure
SSN	Social safety net
TB	Tuberculosis
U.S.	United States
UMNO	United Malays' National Organisation
UN	United Nations
UN	United Nations
UNCT	United Nations Country Team
UNDP	United Nations Development Programme
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNHRD	United Nations Humanitarian Response Depot
UNICEF	United Nations Children's Fund
UNU	United Nations University
WHO	World Health Organization

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