Malaysia

Disaster Management Reference Handbook

2016

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Administrative note:

This report is based primarily on information gathered from open-source material available through the internet. Most of the information used was from United States (U.S.) or other government sources and is thus considered to be in the public domain. Such sources include the CIA (Central Intelligence Agency) Fact Book, U.S. Department of State, 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 used include nongovernmental organization (NGO) home pages, Relief Web, United Nations Development Program (UNDP) or other United Nations agency web pages, World Bank, and Asian Development Bank (ADB). Personal communication with subject matter experts was also made and relative information is sourced and included in this document.

Welcome - Note from the Director

Dear Reader,

The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) has a mandate to provide and facilitate education, training, and research in civil-military operations, particularly operations that require international disaster management and humanitarian assistance that require coordination between the Department of Defense and other agencies. In line with this mandate, CFE-DM has conducted research to create reference books on disaster management roles, processes, capabilities and vulnerabilities. This Disaster Management Reference Handbook Series is designed to provide decision makers, planners and responders a basic understanding of regional disaster management plans and structures, including information on key domestic disaster response entities, basic regional background, and local and international humanitarian organizations present in the region. CFE-DM produces country and regional reference books to provide a commonly available baseline of information regarding disaster management environments. Many places in the Pacific Basin are subject to a variety of disasters including floods, droughts, and landslides, and these handbooks provide a context for regional-specific factors that influence disaster management.

Sincerely,

Col Joseph D. Martin
Director

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

Overview

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

CFE-DM was founded due to a worldwide need based on lessons learned in complex humanitarian emergencies and disaster response operations in the early 1990s. The need was for integrated education, training, operational research, and civil-military coordination across the disaster management spectrum. While maintaining a global mandate, the Asia-Pacific region is our priority of effort and collaboration is the cornerstone of our operational practice.

Our Mission

The Center's mission is to advise U.S. Pacific Command leaders; enable focused engagements, education and training; and increase knowledge of best practices and information to enhance U.S. and international civil-military preparedness for disaster management and humanitarian assistance.

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 basic country data.

Conditions such as poverty, water and sanitation, food security 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 (UN) 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 provide 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 U.S. or other government sources, UN sources, NGO websites, scholarly references, foreign government websites, and various media sources. Whenever further information available may be relevant, a link to the original internet source is provided.

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 for Excellence at: (808) 472-0518. Please visit our website (http://www.cfe-dmha.org) to view the latest electronic versions available or to request a hard copy of a disaster management reference handbook.

Executive Summary

Malaysia is located in Southeast Asia along the Strait of Malacca and the South China Sea. It has a tropical climate with warm weather all year round. Malaysia is geographically located outside the Pacific Ring of Fire. Therefore, it is relatively free from certain severe crises found in neighboring countries. However, Malaysia is vulnerable to natural hazards including floods, forest fires, tsunami, cyclonic storms, landslides, epidemics, and haze.[1] Additionally, the effects of climate change have resulted in an increasing amount of climate related disasters, resulting in a newfound threat to Malaysia's health and development.

Malaysia is considered a middle-income country and has emerged as a multi-sector economy. There are various efforts in place to achieve high-income status by 2020. Malaysia continues to increase domestic demand and limit the country's dependence on exports, although they are still a significant part of their economy. The Five Year Malaysia Plan represents a planning document for Malaysian economic development. It includes plans for improvement in agriculture and urban expansion as well as Disaster Risk Reduction (DRR).

The National Security Council (NSC) coordinates disaster management in accordance with Directive No. 20, the "Policy and Mechanism on National Disaster Relief and Management." The Council facilitates activities that are implemented by the Disaster Management and Relief Committee, which comprises various agencies at federal, state and local levels. This committee is given the task of coordinating flood relief operations at national, state and district level with the combined aims of reducing flood damage and reducing loss of human life. **Note: Malaysia is setting up a new National Disaster Management Agency, which falls under the Prime Minister's department. The changeover is still in progress. Additionally, they are presently drafting new legislation on disaster management. This agency will perform the same disaster management function as those currently performed by the NSC. The majority of discussion in this document will center on the NSC and its disaster management activities.[2]**

Disaster management has consistently been a focus of Malaysia's development policy. Malaysia's National Platform for DRR was formalized in 2013, which involved various stakeholders from the whole of government, as well as the private sector. This is evident by the amount of resources provided to minimize risk factors and facilitate sustainable development. Malaysia's 11th version of the Five Year Plan (2016-2020) focuses on strengthening disaster risk management across five phases (prevention, mitigation, preparedness, response and recovery). Malaysia continues to develop its disaster management structure and policies to meet emerging and chronic disaster risks, as well as enhance its evolving role as an Humanitarian Assistance and Disaster Relief (HADR) leader in the region.

Malaysia
Country Overview

Country Overview

For centuries, port cities on the Malay Archipelago had long served as important stops for spice and silk traders traversing the Indian Ocean. Although the region has an ancient culture and rich history, the nation of Malaysia is only 52 years old. European powers had long recognized the potential value of the territory of Malaya (now known as Malaysia), which produced gold, pepper, and tins the British needed to make tea tins for their Chinese tea exports. Malayan Sultans welcomed British interests, hoping to ward off Siamese expansion on the Malaysian peninsula. In 1824, the Anglo-Dutch treaty gave the British economic control over Malaya. The British took direct control in 1857. Throughout the early 20th century, Britain benefited from Malaya as an economic asset while allowing the sultans of individual areas some political autonomy. From 1942-1945, Malaysia was occupied by Japan. Japan tried to ethnically cleanse Malay of Chinese, and at the same time foster Malayan nationalism.

At the end of the war, Britain returned to Malaya, but local leaders wanted independence. In 1948, the British-ruled territories on the Malay Peninsula formed the Federation of Malay, 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. This was met with protests from Indonesia and the Philippines (both had territorial claims against the new nations). As a result, the first several years of Malaysia's independence were marred by communist insurgencies, and local fighting continued through 1990, but Malaysia survived. Indonesian confrontation with Malaysia, Philippine claims to Sabah, and Singapore's withdrawal in 1965 shaped the country. From 1981-2003, Malaysia diversified its economy from one of depending on exports of raw materials to developing manufacturing, services and tourism.[3, 4] Table 1 shows Malaysia at a glance.[5]

Area:	329,293 sq. km
Language:	Bahasa Malaysia (Malay); English; Chinese (various dialects)
Religion:	Sunni Islam; Christianity; Buddhism; Hinduism
Time Zone:	GMT (Greenwich Mean Time) +8
Population:	29,900,000 (2014)
Neighbors:	Brunei, Indonesia, Philippines, Singapore, Thailand
Capital City	Kuala Lumpur (Putrajaya is the administrative capital)
Primary Ports	Port Klang, Penang, Pasir Gudang, Tanjung Pelepas
Primary Airport	Kuala Lumpur International Airport
Currency	Malaysian ringgit (MYR) or (RM)

Table 1: Malaysia Country Overview

Culture

The World Disasters Report 2014 defines culture specifically in relation to the issues of risk and how risk can be differently perceived. "Culture consists of beliefs, attitudes, values and their associated behaviors, that are shared by a significant number of people in hazard-affected places. Culture in relation to risk refers to the ways that people interpret and live with risk, and how their perceptions, attitudes and behavior influence their vulnerability to hazards."[7]

The interaction between culture and risk relates to many aspects of human and institutional behavior. This includes:[8]

- religious and related beliefs
- livelihood needs and different perceptions of risk
- connections with others in 'communities' significance of power relations in determining risk
- defining culture where people live
- the effects of culture on type of house and construction methods
- attitude and beliefs of both people and organizations about disease and health

The Malaysian culture has developed from the various people who have settled there along with indigenous Malays. Malaysia is a predominantly Muslim country. However, Buddhist and Hindu minorities co-exist peacefully alongside this majority.[9]

Malaysia is a multi-cultural society. The primary ethnic groups are the native Malays as well as large populations of Chinese and Indians. Although various cultures are educated in the same schools and occupy the same offices, very few marry outside their own ethnicity. Families primarily socialize within their own ethnic groups, which aids in maintaining their individual traditions and lifestyles.

The family (including the extended family) is considered the center of the social structure in Malaysia. There is a strong emphasis on unity, loyalty and respect for the elderly. The family is the place where the individual can be guaranteed both emotional and financial support. If one member of the family suffers a financial setback, the rest of the family contributes what they can to assist.

Malaysians strive to maintain face and avoid shame both in public and private environments. This embraces qualities such as a good name, good character and being held in esteem by one's peers. This desire to maintain face makes Malaysia strive for harmonious relationships. As a result, they heavily rely on non-verbal communication (i.e. facial expressions, tone of voice, body language, etc.). This style tends to be subtle and indirect. Malays may hint at a point rather than making a direct statement as that might cause the person to lose face.[10]

Demographics

Understanding the demographic context of Malaysia provides insight into socio-cultural factors that will affect disaster management effectiveness and disaster vulnerabilities. It is important to reflect gender, ethnicity, vulnerable groups, and economics in the planning and implementation of disaster preparedness, mitigation, and response activities to address gaps and risks.

Ethnic Makeup

There are three ethnic groups in Malaysia: the Malays, the Chinese Malaysians and the Indian Malaysians. Malays and other indigenous (Bumiputera) peoples of the

Malayan peninsula form the majority of the population (60.3%), while the two largest minorities are Chinese (22.9%) and Indian (6.8%). There is a distinction; people of Chinese or Indian descent are Malaysians, but not Malays. Malays are referred to as Bumiputeras, or original inhabitants of the Malayan peninsula.[11]

Key Population Centers

Malaysia has a population of approximately 29 million (2014).[12] An estimated 7.2 million Malaysians live in the capital Kuala Lumpur (1.6 million) and its surrounding suburbs and satellite cities of Subang Jaya, Klang, Ampang, Shah Alam, and Petaling Jaya. The other main urban centers are Penang (1.6 million), Johor Bahru (1.5 million) and Ipoh (750,000). Of the two states on the island of Borneo, Sabah has a population of more than 3.2 million, while that of Sarawak is more than 2.4 million.

Malaysia's population density stands at 86.44 per square kilometer.[13] Figure 1 is a map of Malaysia showing these various areas.[14]

Language

Malaysia's official language is Bahasa Malaysia, a form of Malay. English is the former colonial language, and is still in common use, although not an official language. Through education, Malay language has continued to develop and can be used in Malaysia and neighboring countries such as Singapore, Indonesia, Southern Thailand and Brunei.[15]

The citizens of Malaysia speak about 140 additional languages as mother tongues. Malaysians of Chinese descent come from many different regions of China, so they may speak not just Mandarin or Cantonese, but also Hokkien, Foochu and other dialects. Most Malaysians of Indian descent are

Figure 1: Map of Malaysia

Tamil speakers. In East Malaysia (Malaysian Borneo) people speak over 100 local languages including Iban and Kadazan.[16]

Religion

Islam is the official religion of Malaysia at 61.3%. Other religions include Buddhist 19.8%, Christian 9.2%, Hindu 6.3%, Confucianism, Taoism, and other traditional Chinese religions 1.3%, other 0.4%, none 0.8%, and unspecified 1% (2010 est.)[17]

Vulnerable Groups

Malaysia has many vulnerable groups including the poor, children, refugees, unregistered migrants, internally displaced persons, and trafficked persons.

The Poor:

Malaysia can claim success in combatting poverty. However, despite its strides in poverty reduction, a vulnerable group of people in the country are experiencing poverty for some geographical and societal reasons.[18] Malaysia's poverty rate is 1.7%.[19] Even though poverty is effectively managed, the current income of the country is considerably low and 40% of households still struggle with a monthly income, which is less than U.S. $766. There is also a disparity in income levels and economic status between Sabah and Sarawak and the Peninsular Malaysia. Additionally, an effective strategy should be adopted to minimize the disparity of economic status between rural and urban areas. In order to address the issues emerging between different geographical areas and communities, the New Economic Model and the 10th Malaysia Plan were devised to focus on inclusive growth and aspire to provide equal opportunities for all Malaysians.[20]

Children:

Children are often vulnerable in Malaysia. According to United Nations Children Fund (UNICEF), children at the greatest risk are non-Malaysian children born in Malaysia, such as asylum seeking and refugee children as well as children of undocumented migrant workers, children of single mothers and children born in remote areas of the country. Several factors that cause children to be vulnerable include poverty, an urban-rural divide in geography, family breakdown (divorce, imprisonment of a parent), exploitation of children through trafficking and forced labor, child marriage, cultural norms and societal attitudes that create discrimination against gender, migrants, non-citizens, drug abuse, sex workers, and HIV and AIDS.[21]

Refugees, unregistered migrants, internally displaced persons:[22,23]

Malaysia's stateless population consists of Rohingya Muslim refugees from Myanmar (Burma), ethnic Indians, and the children of Filipino and Indonesian illegal migrants.[24] In May of 2015, thousands of stateless Rohingya Muslims fled deadly sectarian violence in Myanmar and Bangladesh to join some 75,000 Rohingya who made their way to Malaysia years and decades before. The Rohingya were stripped of their Burmese citizenship under the citizenship law of 1982, making them stateless and vulnerable to exploitation. Myanmar considers the Rohingya to be from Bangladesh, despite the fact that many have lived in Myanmar for generations. In Malaysia, their status as refugees and unregistered migrants bars them from sending their children to government schools. They are also barred from holding jobs legally. This results in little or no education and menial

off-the-books labor.

In May 2015, the foreign ministers of Malaysia, Indonesia and Thailand signed a joint agreement that would allow the rescue of thousands of dehydrated and starving Rohingya and Bangladeshis who had been drifting in the Andaman Sea for weeks. Under enormous international pressure, these three countries offered to help 7,000 people at sea.[25]

The Rohingya have established enclaves in several neighborhoods on the edges of Kuala Lumpur, Malaysia's capital, living in concrete housing blocks and shopping in open-air markets. Tens of thousands of Rohingya crowd into apartments and dilapidated houses that often hold several families each. Access to medical care is also a problem for this vulnerable population. Many Rohingya migrants face a long, uncertain wait for the United Nations refugee agency office in Kuala Lumpur to accredit them as refugees, which would entitle them to a precious identity card that many see as their best protection against detention or abuse by officials and the police.[26]

Malaysia also has 40,000 stateless persons. Filipino and Indonesian children who have not have been registered for birth certificates by their parents, or who received birth certificates stamped "foreigner" are not eligible to go to government schools. These children are vulnerable to statelessness should they not be able to apply to their parents' country of origin for a passport. This population is also vulnerable to trafficking.[27]

Trafficking in persons:

Malaysia is a source and transit country for men, women, and children subjected to forced labor and women and children subjected to sex trafficking. Malaysia is mainly a destination country for foreign workers who migrate willingly from countries including Indonesia,

Nepal, India, Thailand, the Philippines, Burma, Cambodia, Laos, Bangladesh, and Vietnam but subsequently encounter forced labor or debt bondage at the hands of their employers in the domestic, agricultural, construction, plantation, and industrial sectors. A small number of Malaysian citizens were reportedly trafficked internally and abroad for commercial sexual exploitation in 2013. What is also difficult is that some officials are reportedly complicit in facilitating trafficking.

Malaysia has a Tier 3 rating, does not fully comply with the minimum standards for the elimination of trafficking, and is not making significant efforts to do so. NGOs provide the majority of victim rehabilitation and counseling services with no financial support from the government.[28]

Economics

Malaysia is considered a middle-income country. In the early 1970's they were primarily a producer of raw materials, but have since emerged into a multi-sector economy. Malaysia is attempting to achieve high-income status by 2020 and move further up the value-added production chain by attracting investments in Islamic Finance, high technology industries, biotechnology and services. Malaysia has established an economic transformation program consisting of projects and policy measures intended to accelerate the country's economic growth.

Malaysia is continuing efforts to boost domestic demand and reduce the economy's dependence on exports. However, exports are still a significant part of the Malaysian economy. This is particularly true of electronics, oil and gas, palm oil and rubber. Exports of goods and services make up more than 80 percent of their Gross Domestic

Product. The fall of global oil prices in the second half of 2014 strained government finances, shrunk their account surplus and put downward pressure on their currency. Malaysia is heavily dependent on Petronas, their main state oil producer.

A well-developed regulatory regime has limited Malaysia's exposure to riskier financial instruments and the global financial crisis. Malaysia is a member of the 12-nation Trans-Pacific Partnership free trade agreement negotiations and with the nine other Association of Southeast Asian Nations (ASEAN) members forms the ASEAN economic community.[29]

Agriculture, forestry and fisheries employ around 15% of the workforce and account for around the same percentage of Gross Domestic Product (GDP). Under the 10th Malaysia Plan (2010-15) the government announced it would maintain a 45-day rice stockpile in order to ensure both supplies and price stability. Some of the imports needed to build and maintain the stockpile may be obtained through bartering palm oil, Malaysia's primary agriculture export.

Malaysia is not threatened by food shortages, but rather by politically destabilizing high prices affecting its large urban population and low farm gate prices for its important agricultural sector. The government decision to create a major rice stockpile will provide a buffer for this key staple. However, Malaysia's relatively small population and abundance of local produce mean that any food supply crisis will be short-lived and manageable.[30]

Environment

Environmental considerations influence disaster management in many ways. This section outlines some of the key environmental factors that contribute to Malaysia's disaster hazards and affect potential response operations.

Geography

Malaysia is located in Southeast Asia and borders Thailand, Brunei and Indonesia. It also shares maritime borders with Singapore, the Philippines and Vietnam. Malaysia consists of thirteen states and three Federal territories (Figure 2)[31]. The capital is located in Kuala Lumpur.[32]

The country of Malaysia is separated into Peninsular Malaysia, which is part of Southeast Asia and the two states of Sabah and Sarawak (East Malaysia), on the northern

Figure 2: Map of the Islands of Malaysia

edges of the island of Borneo. Peninsular Malaysia is separated from these states by the South China Sea. To the north of peninsular Malaysia is Thailand while its southern neighbor is Singapore. Sabah and Sarawak are bounded by Indonesia while Sarawak also shares a border with Brunei.[33]

Malaysia has an area of 329,847 sq km (120,354 sq. miles), with a coastline of 4,675 km (2905 miles). Both Peninsular and East Malaysia consist of coastal plains rising to rugged forested mountainous interiors.[34] The elevation countrywide ranges between 3,500–6,000 feet (1067–1829 meters) with the major exception being Mount Kinabalu, at an elevation of 13,451 feet (4100 meters) in the state of Sabah. The lowest point of the country is the South China Sea at 0 ft. There are also some very small islands off the coastlines of Malaysia. Running along the peninsula are numerous caves, with the mulu caves in East Malaysia being the largest in the world. Over two dozen rivers flow from the mountains with the largest being Pahag, Rajang, and Sugut.[35]

The country experiences both the southwest (April to October) and northeast (October to February) monsoons. The average temperature in Malaysia is 27.5°C. The highest monthly average temperature is 33°C whereas the lowest monthly average is 22°C. It receives an average rainfall of 2,400 mm.[36]

Borders

Malaysia's external relations are unlikely to lead to serious conflict but unresolved border disputes sometimes flare into low-level crises. Malaysia and Indonesia have a number of maritime border disputes, such as the Ambalat sea block off Sabah. Muslim rebel and terrorist groups from the southern Philippines also pose a security threat to Sabah. Malaysia's

territorial dispute with China in the South China Sea is unlikely to lead to full-scale military conflict, but China's increasingly assertive stance increases the risk of maritime confrontations, involving the firing of water cannons, ramming, and even exchanges of gunfire.[37] Additionally, there is an ongoing conflict on the border of Southern Thailand, which is a source of foreign policy focus. This includes the smuggling of economic migrants and the existence of smuggling camps along the border.[38]

Climate

Malaysia has a tropical climate with warm weather all year round. Temperatures range from 21 to 32 degrees Celsius (70 to 90 degrees Fahrenheit). Annual rainfall varies from 2000mm to 2500mm (6.5 to 8.2 feet).[39] The monsoon season is divided between two areas of the country. The annual southwest monsoons run from April to October while the northeast monsoons run from October–February.[40]

Malaysia
Disaster Overview

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Disaster Overview

Hazards

Malaysia is geographically outside the Pacific Rim of Fire and is relatively free from any severe ravages and destruction caused by natural disasters. However, the country is vulnerable to natural hazards including floods, forest fires, tsunami, cyclonic storms, landslides, seismic activity, epidemics, and haze (local and trans boundary).[41] Additionally, in recent years their exposure to a range of climate-related disasters has been magnified in part, due to climate change. Weather extremes are occurring more frequently and with higher intensities. Hazards become disasters if there are vulnerable people affected. For example, the same hurricane can pass over three countries in the Caribbean and have different effects in each. The intensity of its impact depends on vulnerability. For Disaster Risk Reduction (DRR) to succeed, it must overcome vulnerability.[42] Table 2 represents the relative frequency of Disaster Hazards in Malaysia.

High	Medium	Low
Flood	Forest Fire Landslide	Earthquake Tsunami Drought Storm Haze

Table 2: Relative Frequency of Disaster Hazards in Malaysia

Photo 1: Flooded Streets of the Northeastern Town of Kuantan

Floods:

Floods are the major natural disaster threat facing Malaysia. Landslides and droughts are also significant, although most prevalent in the Eastern part of the country.[43] Based on its geographical location, Malaysia is less vulnerable than other parts of the region. The 2014-year end downpour and floods were the worst ever in the country's history, affecting more than half a million people. Damage to infrastructure alone was estimated at $670 million U.S. dollars (RM2.851 billion). Areas that have never experienced floods before were also inundated and floodwater rose at an unprecedented level.[44] Kuantan (Photo 1) (northeast Malaysia) was affected by flooding in December 2014.[45]

Landslides:

Landslides are found in the form of slope failures along highways and roads in rural, residential and urban areas. This includes man-made and natural slopes. There have also been instances of large-scale failures in natural terrain such as rock falls at lime stone hills, debris flows along valleys and slow-

Photo 2: Malaysia Landslide

Year	Total Death	Total Landslide	Event with Fatality
1900–1979	70	4	3 Perak: 3
1980–1984	n.d.	n.d.	n.d.
1985–1989	2	1	1 Senah: 1
1990–1994	53	7	3 Selangor: 2 Pehang: 1
1995–1999	109+302 =411	21	10 Sabah: 5 Pahng: 2 Perak: 2 Kuala Lumpar: 1
2000–2004	57	14	10 Selangor: 4 Sebah: 2 Perak: 1 Pahang: 1 Johor: 1 Sarawak: 1
2005– Sept 2009	28	13	9 Selangor: 4 Sebah: 3 Pahang: 1 Sarawak: 1

Table 3: Summary of Major Landslide Events in Malaysia 1900–2009

movement landslides in the mountain regions. From 1900 to 2009, 611 lives were lost in 60 recorded landslides, though these numbers do not take into account unrecorded events, particularly between 1900 and 1990. Records from 1989 to 2009 show that there were 56 landslide events, of which 33 had fatalities, with 541 lives lost. On average, there were about 2.8 landslides per year, of which every year 1.7 landslides occurred with human casualty and property loss. Landslides are the hazard that has traditionally triggered the most public interest, especially when they occur in urban areas. Table 3 provides a summary of the major landslide events in Malaysia from 1900–2009.[46] Photo 2 shows a landslide on Sultan Iskandar Highway in Kuala Lumpur (January 2014).[47]

Haze:

In addition to flooding, Malaysia also suffers from periodic intense haze. Haze is measured by the Air Pollutant Index (API). This index calculation is based on five major air pollutants, namely sulphur dioxide, nitrogen dioxide, ground level ozone, carbon monoxide and particulate matter with a diameter below 10 micrometers. Most of these pollutants come from sources such as industries, motor vehicles, open burning and power generation.[48]

Photo 3: Malaysia Haze

This has caused pollution levels to reach record highs. It is criticized that haze in Malaysia may be a direct result of "slash and burn" activities in Indonesia.[49] Photo 3 depicts haze activity in Malaysia.[50] When the API index gets to hazardous levels it causes a chain reaction: schools close, residents cannot leave their homes, flights become delayed or cancelled, ships have poor visibility, and it causes respiratory health problems.[51] In 2013, Putrajaya declared a state of emergency in Muar and Ledang in Johor as API levels crossed very unhealthy levels due to smoke from forest fires in Indonesia.[52] Furthermore, the destruction of peatland to make way for pulp and palm oil plantations contributes to the haze problem. The fumes that come from these fires are highly toxic. This also causes the production levels of Carbon dioxide (contained in these peatlands) to increase dramatically.[53]

Malaysia collaborates with neighboring countries in minimizing risks and impacts of haze due to trans-boundary transfer under the framework of the ASEAN Agreement on Trans-Boundary Haze Pollution 2002. This collaboration includes assistance for carrying out cloud seeding operation in areas with forest fire during the dry periods. Bilateral cooperation in disaster management is also established with Thailand under the Disaster Management Working Group of the General Border Committee (GBC).[54] Figure 3 reflects internationally reported losses in terms of frequency, mortality, and economics for Malaysia between 1990 and 2014.[55]

FREQUENCY

- Drought
- Earthquake
- Flood
- Landslide
- Mass Movement (dry)
- Storm
- Wildfire

62.5 · 12.5 · 8.3 · 8.3

MORTALITY

- Earthquake
- Flood
- Landslide
- Mass Movement (dry)
- Storm

39.9 · 24.1 · 13.9 · 11.6 · 10.4

ECONOMIC

- Drought
- Earthquake
- Flood
- Landslide
- Mass Movement (dry)
- Storm
- Wildfire

62.5 · 12.5 · 8.3 · 8.3
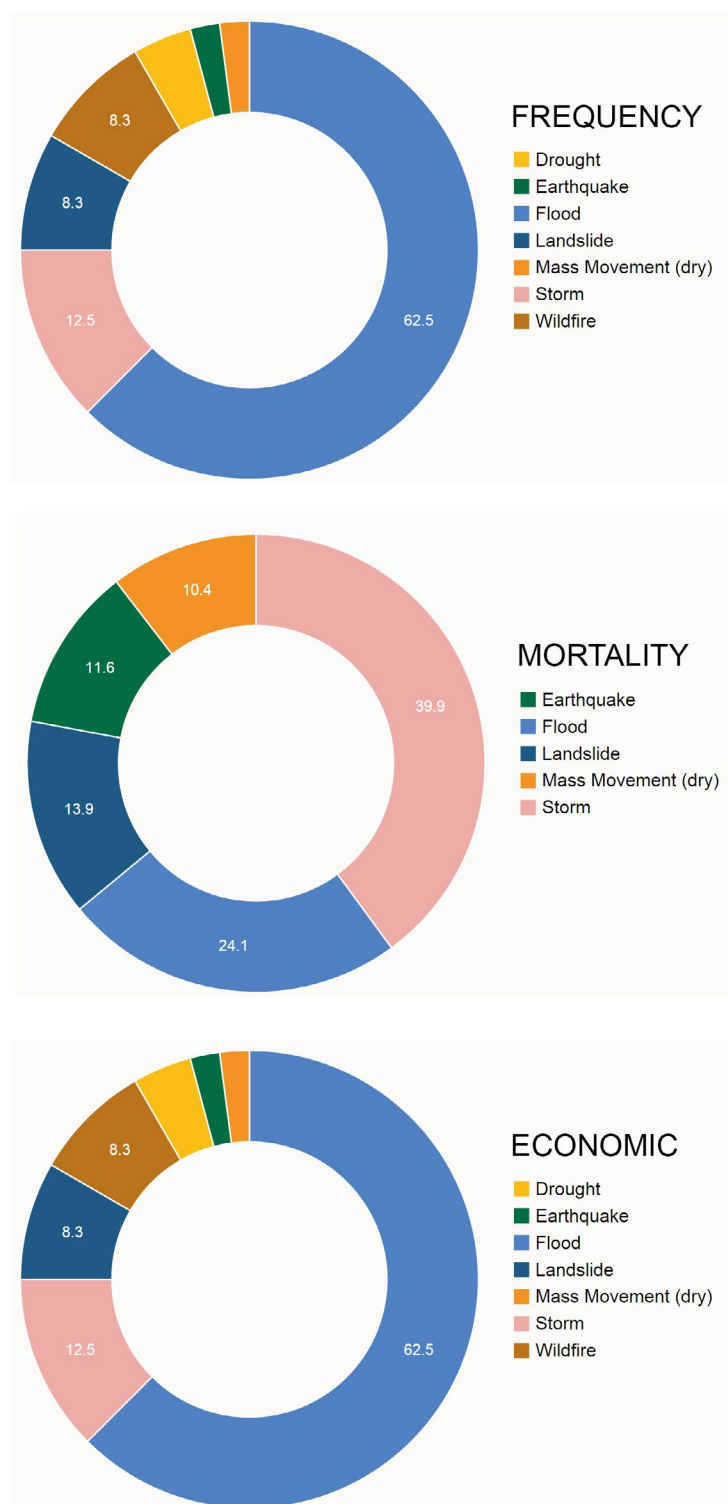
Figure 3: Malaysia's Reported Losses Between 1990–2014.

Figure Note: For a disaster to be entered into the database at least one of the following criteria must be met:
– Ten or more people reported killed
– Hundred (100) or more people reported affected
– Declaration of a state of emergency
– Call for International Assistance

Recent History of Natural Disasters

Below is a list of Malaysia's natural disasters from 1997–2015.

August 1997 – Forest Fires caused economic losses of about $300 million.

December 2004 – The Great Indian Ocean tsunami impacted Penang resulting in at least 72 casualties, 6 of whom were foreign tourists.[56]

January 2007 – Floods in the Johor–Pahang region killed 17 people, affected 137,533 people and caused the economic loss of about $605 million.

December 2007 – Malaysia east coast floods claimed 7 lives in Kelantan, Pahang and Johor state. More than 4,000 people were sent to relief centers.

August 2010 – Around 2,000 people were affected by flooding in Bendang, Man Kedah. By October, the northern states of Perlis, Terengganu, and Kelantan were also hit by continuous rain, triggering what was said to be the worst flood in 30 years. In response, domestic flood response mechanisms were activated, including coordination with the National Security Council (NSC) and the local authorities in the region. The operation lasted from 3–8 November with 688 survivors treated at 7 evacuation centers and more than 2,500 hygiene kits distributed at 12 locations.[57]

January 2011 – Heavy rainfall caused three of the main rivers in Johor (Sungai Muar, Sungai Benut and Sumngai Mengkibol) to burst their banks, triggering flooding throughout the region. The worst affected areas were Segamat, Batu Pahat, Kluang and Muar. More than 24,000 were forced to seek refuge in 71 relief centers, and the International Federation of the Red Cross (IFRC) reported that four adults and one child died as a result of the flooding.[58]

December 2014 – Floods triggered by torrential monsoon rains in the east coast (Terengganu, Pahang, and Kelantan states) forced almost 14,000 people to flee their homes.[59] Photo 4 shows Malaysian Red Crescent volunteers and the villagers of Kampung Pasir Tumboh (near Kelantan) working together to set up the water treatment unit.[60] In addition to the three most affected states, four other states in peninsular Malaysia (Perak, Johor, Selangor and Perlis) and one state in East Malaysia (Sabah) also experienced floods due to the heavy rainfalls. At least 21 people were killed, and almost a quarter of a million people were displaced.[61] These were considered the worst floods to hit the state.[62]

Photo 4: Red Cross Working with Villagers to Set Up a Water Treatment Unit

Photo 5: Wreckage from June 2015 Malaysia Earthquake

June 2015 – A magnitude 5.9 earthquake struck near Mount Kinabalu killing 18 and stranding more than a hundred people on the peak. The quake depicted in Photo 5 was centered northwest of Ranau district in Sabah state on Borneo at a depth of 34 miles.[63] The quake damaged roads and buildings, including schools and a hospital on Sabah's west coast.[64]

Climate Change

Malaysia faces numerous potential threats to population health and development due to climate change. Communities living in coastal regions could be at risk of flooding due to sea-level rise. Climate sensitive diseases such as malaria, cholera and dengue as well as heat-stress are likely to rise with increased temperatures and changes in precipitation patterns.[65]

With climate-related natural disasters and rising sea levels threatening to undermine human development progress, countries recognize that they have little choice but to formulate policies on adapting to climate change now and mitigating climate change for the future. Malaysia's exposure to a range of climate-related disasters has been magnified in part, due to climate change.[66] Climate change is primarily affecting Malaysia in the form of more severe flooding and a long-term trend of gradually rising temperatures.[67]

The agriculture in Malaysia is vulnerable to climate change. Crop yields and changes in productivity will vary considerably across Malaysia.[68] Geographic limits and yields of different crops may be altered by changes in precipitation, temperature, cloud cover and soil moisture as well as increases in Carbon dioxide concentrations. High temperatures and diminished rainfall may reduce soil moisture and water available for irrigation, thus impairing crop growth in non-irrigated regions. The risk of losses due to weeds, insects and diseases is also likely to increase.[69]

Climate change is a global issue with significant implications for Malaysia. Carbon dioxide from fuel combustion and deforestation activities contributes to global warming and has caused a shift in the climate system. Malaysia will have to adopt a dual strategy in addressing climate change impacts:[70] first, adaptation strategies to protect economic growth and development factors from the impact of climate change; and secondly, mitigation strategies to reduce emission of greenhouse gases.[71] Malaysia announced a conditional voluntary target of up to 40% reduction in carbon intensity of GDP by 2020 compared to 2005 levels. Malaysia has also had a strong focus on the development of sustainable energy policies.[72]

One initiative, negotiated by governments from the Asia-Pacific region, will protect the Coral Triangle, the world's richest coral reef

that stretches from Malaysia and Indonesia to the Solomon Islands and provides food and livelihoods to more than 100 million people.[73] Malaysia is currently implementing projects on health adaptation to climate change, building institutional and technical capacities to work on climate change and health, and has conducted a national assessment of climate change impacts, vulnerability and adaptation for health. Country reported data indicate further opportunities for action in the following areas:

1. **Adaptation**
   – Estimate costs to implement health resilience to climate change.
2. **Mitigation**
   – Develop an Integrated Disease Surveillance and Response (IDSR) system with early warning for climate-sensitive health risks.
   – Conduct valuation of co-benefits to health of climate change mitigation activities.
3. **National policy implementation**
   – Formulate action plans and work programs to support the implementation of policies related to climate change and health.[74]

Infectious Disease

Malaysia's population is susceptible to several infectious disease threats such as Dengue, HIV, Hepatitis A, Malaria, Measles, Typhoid, Japanese B Encephalitis, Rabies, Bird Flu, and Tuberculosis. More information on these communicable diseases can be found in the Health section of this document.

Endemic Conditions

Malaysia's rapid industrialization has had an impact on the environment. Its economic development has been largely influenced by the production and export of commodity goods. Malaysia operates a ban on the export of logs to preserve the Malaysian rainforest. Logging controls are now linked to replanting, as the Malaysian government has pledged to eventually achieve a replacement rate of reforestation. Sarawak is the only Malaysian state continuing to allow the export of unprocessed saw logs. Logs from this source account for nearly half of the total extracted in Malaysia.[75] Malaysia is a partner country in the United Nations Reducing Emissions from Deforestation and Degradation (UN-REDD) initiative but Malaysia still remains one of the world's top producers of palm oil and the mining comes at the expense of its forests.[76] Photo 6 is a photo of the logging that takes place in Malaysia.[77]

Photo 6: Logging in Malaysia

Malaysia
Organizational Structure

Organizational Structure for Disaster Management

Malaysia is setting up a new National Disaster Management Agency. The agency falls under the Prime Minister's department and takes over disaster management from the NSC. Their first official meeting was held 8 September 2015. The Civil Defense Department is part of this agency.[78] As part of the new National Disaster Management Agency the Government of Malaysia will be better able to support the most hazard–prone areas of the country. Small agency units have been placed at the community or village level. The National Disaster Management Agency will be headed by senior government officials. The mini disaster management units will be headed by the Civil Defense Department and the focus will be on disaster–prone states in the East Coast, Sabah and Sarawak. The management and coordination of natural disasters has been placed under this new agency.[79]

Note: As this agency is fairly new, the discussion in this section centers on the NSC and its disaster management coordination role.

Due to the flooding hazards in Malaysia, the Government established the Natural Disaster Management and Relief Committee in 1972. It was given the task of coordinating flood relief operations at every state of national,

state and district levels with the combined aims of reducing flood damage and preventing loss of human life. The flood disaster management agency in Malaysia is based on the NSC Directive No. 20 and Fixed Operating Regulations. These documents outline the aims of Policy and Mechanism on Disaster and Relief Management on Land. The Directive also describes the purpose of responsibilities and determining how the various agencies should be involved in disaster management.[80] The council coordinates activities that are implemented by the National Disaster Management and Relief Committee comprising various agencies at federal, state and local levels. Figure 4 shows the Disaster Management Structure.[81]
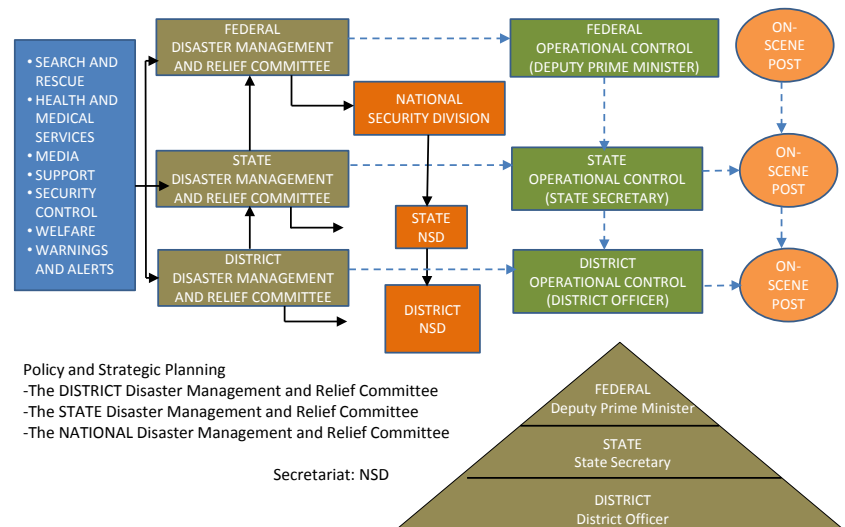
Figure 4: Malaysia Disaster Management Structure

Government agencies are responsible for different aspects of DRR while maintaining their core capabilities. At state level, the District Office is empowered with major roles in disaster management and relief. Activation of the specific executing committee will depend on the characteristics and scale of the event as well as coverage of impacted areas. In any case, the District Office is the key

implementing agency on the ground to ensure responses are coordinated, assets and human resources are sufficient, and communication is established with the media.

Each disaster management committee has its own responsibilities. Level 1 is a local incident, which is controllable and has no potential to spread. Therefore, the District committee ensures coordinated actions, including provision of available assets and human resources. Level 2 is a more serious incident covering a wider area (two districts) with the potential of spreading out. The State provides assistance to the District such as financial aid, additional assets and human resources as needed. Level 3 is complex in nature and effecting a wide area or more than two states. The Federal government determines the national disaster management policy, financial assets and human resources. Figure 5 shows the three levels.[82]
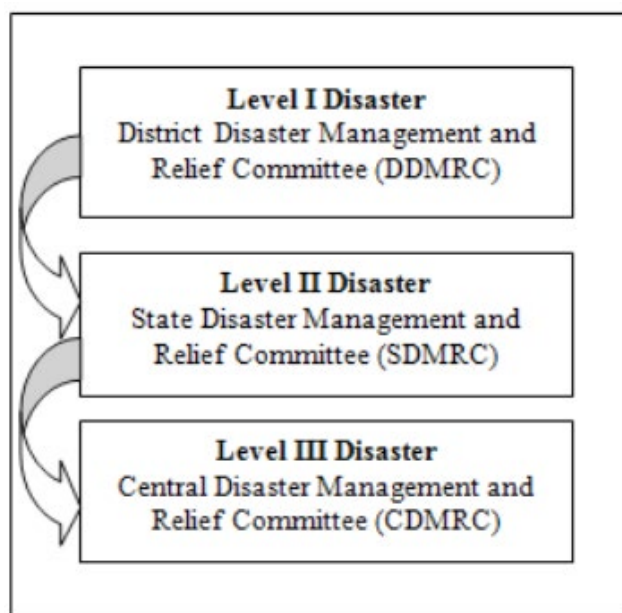
Figure 5: Disaster Management Organization Levels in Malaysia

The following reflects membership of the National Disaster Management and Relief Committee:

Chairman: Honorable Minister appointed by the Prime Minister
Members:
1. Minister of Finance
2. Minister of National Unity and Community Development
3. Chief Secretary of State
4. Commander of the Armed Forces
5. General Director of Police Department
6. General Director of Health
7. General Director of National Security Division
8. General Director of Fire Brigade and Rescue Malaysia
9. General Director of Atomic Energy Licensing Board
10. General Director of Broadcasting
11. General Director of Information
12. General Director of Transportation Department
13. General Director of Public Works Department
14. General Director of Environmental Department
15. General Director of Social Welfare Department
16. General Director of Working and Health Security Department
17. General Director of Meteorology Service Department
18. General Director of Civil Aviation Department

The National committee responsibilities are as follows:

1. To formulate policy and frame the strategy in managing the national disaster.
2. To define the policy and directives in managing a disaster and ensure it is carried out in accordance with the decided procedures and active plans.
3. To ask all involved agencies to present reports on the preventive steps taken in order to reduce the disaster impact.
4. To coordinate requirements in disaster management and relief, such as decisions on logistics assistance and requisition of tools and machinery owned by government agencies or private sectors.
5. To get expertise from local authorities or foreign countries to help in managing a disaster.
6. To form an investigative committee, if necessary.
7. To ensure that search and rescue exercises are carried out from time to time by relevant agencies.
8. To offer all forms of assistance needed by the Operational Commander in order to succeed in the function of Search and Rescue On-Scene.
9. To form a National Disaster Operation Center in case of Disaster level III.
10. To determine comprehensive relief efforts such as welfare, health, shelter and security to victims and rescuers, including rehabilitation.
11. To form working committees, such as committee of welfare, transport, finance, etc., as needed to ensure the disaster management process runs smoothly.
12. To form a data bank on tools, equipment and list of expertise or skills needed at national level for disaster management.
13. To set and carry out a post-mortem after a disaster and bring out recommendations or proposals to overcome weaknesses identified from the post-mortem.
14. To arrange a coordinated training program for the rescuers and attain skill levels need in a disaster.
15. To form an educational and early preventive program for the public in avoiding and facing a disaster.
16. To ensure any steps taken by the relevant agencies in preventing, controlling and training or education programs is done smoothly and effectively.
17. To periodically review the existing policy, directive, strategy and procedure in order to strengthen National Disaster Management.
18. To prepare reports on disaster management and control from previous disasters, covering all aspects of search and rescue as well as emergency relief and rehabilitation offered to the victims.

The following reflects membership of the State Disaster Management and Relief Committee:

Chairman: State Secretary
Members:
1. State Police Officer Chief
2. Brigade Commander
3. Director of State Fire and Rescue Department
4. Director of State Health Department
5. Director of State Public Works Department
6. Director of State Social Welfare Department
7. Director of State Information Department
8. Director of State Broadcasting Department
9. Director of State Civil Defense Department
10. Director of State Environment Department
11. Director of State Workers Security and Health Department

12. Director of State Meteorology Department
13. Director of Civil Aviation Department
14. Director of State Irrigation and Drainage Department
15. Director of State Geological Survey Department
16. Director of Transport Department
17. Director of Malaysian People Voluntary Alliance
18. Manager of Malaysia National Telecommunication Agency

The State committee responsibilities are as follows:

1. Implement the policy and strategy of national disaster management in handling any disaster at state level.
2. To coordinate all needs of disaster management and relief, such as deciding on logistical assistance and requisition of tools and machinery owned by government agencies of private sectors.
3. To provide food, medical treatment, evacuation and other emergency assistance to victims and rescuers.
4. Activate the State Disaster Operation Controlling Centre for any level I disaster.
5. As required, form a working committee to facilitate smooth operations of sub committees (i.e. Welfare Committee, Transportation Committee).
6. Form a data bank on tolls, equipment and list of skills at state level needed in disaster management.
7. Form a system of announcement and warning for public information.
8. Conduct periodic exercises involving state and district level agencies.
9. To organize research and to collect information on the potentiality and risk of a disaster in the state or district.
10. Formulate a post mortem: after every

disaster covering all aspects of disasters such as the origins and effects of the incident, with a conclusion and recommendation to overcome any weakness identified.
11. To ask those relevant agencies to bring forward reports on the preventive steps taken to avoid or minimize the impact of disasters.
12. Ensure actions taken by relevant agencies (at state level) in terms of preventing, controlling, providing education and the exercising.
13. To prepare reports on disaster management and control including all aspects of search and rescue operations, emergency assistance and victim rehabilitation.

The following reflects membership of the District Disaster Management and Relief Committee:

Chairman: District Officer
Members:
1. Chief of District Police Officer
2. District Health Officer
3. District Engineer, Public Works Department
4. Malaysian Armed Forces Representative
5. District Council Secretary
6. District Social Welfare Officer
7. Office of District Civil Defense Corporation
8. District Information Officer
9. District Engineer, Irrigation and Drainage Department
10. District Malaysian People Voluntary Alliance Officer
11. District Electrical Power Officer
12. District Telecommunications Officer

The District committee responsibilities are as follows:

1. Coordinate Disaster Management and Relief necessities, such as arranging the logistic support and requisition of equipment and machinery needed temporarily from government agencies or private sectors.
2. Activation of the District Disaster Operation Controlling Center whenever a level I disaster occurs.
3. Fix the distribution of works for relevant agencies at the disaster Operation Controlling Center.
4. Identify and form evacuation centers.
5. Provided basic necessities such as shelters, food, clothes and medical treatment to the victims and rescuers.
6. Ensure Search and Rescue operations are done smoothly and effectively.
7. Create a communication system between the Control Post On-Scene and the State Disaster Operation Controlling Center.
8. Form working committees whenever necessary to help with disaster management operations (i.e. Welfare Committee, Transportation Committee, Finance Committee, etc.)
9. Form sub-committees at village or neighborhood levels to assist with the work of disaster management on-scene.
10. To create a data bank on tools, equipment and list of skills in disaster management at district level.
11. To decide and carry on a post mortem after any disaster and to bring forward recommendations in overcoming any weakness identified.
12. To carry out research and to collect information on any disaster potentiality at risk in the district.
13. To ask relevant agencies to submit their reports on preventive steps taken to avoid or to minimize the impacts of disaster.
14. To prepare reports on the disaster management and control, covering all aspects of search and rescue and emergency assistance and rehabilitation offered to the victims.

Role of the National Security Division in National Disaster Management and Relief:

1. To offer secretarial services to all disaster management committees according to level of disaster that occurred.
2. To ensure that the experience and implementation of policy and mechanism in disaster management is carried out smoothly.
3. To ensure that a post-mortem of disaster management is carried out soon after the incident.
4. To mobilize the Special Malaysia Disaster Assistance and Rescue Team for Search and Rescue Operations when necessary.
5. To coordinate periodic Disaster Management and Search and Rescue Training.
6. To monitor the implementation of disaster preventive steps and controls taken by relevant agencies.
7. To plan, coordinate and control the implementation of training and preventive education strategy for officers and staff of government departments, and public and non-government entities relating to disaster relief.
8. To advise the Disaster Management and Relief Committee when needed to promote the management and control of the disaster.

Government

Malaysia's government is described as a constitutional monarchy because of its Sultanate history that began in the 12th century. This foundation combined with Malaysia's introduction to a republican based constitution by Britain placed two government ideas at odds with the population. The ideals for labor rights of the Malay Unions are formed in the country with regular challenges. Since Malaysia's independence in 1957, challenges have been related to the differences in ethnicities and distribution of wealth. Malays labor control of political power in the country is very weak since it lacks economic support. This has led Malays to seek more control over the Malaysian economy, leaving Chinese, Indians and even some Malaysians protesting. Much of the current political conditions in Malaysia are associated with governance and economics. There are continuing challenges to strike a balance in a country where centuries of migration, trade, war and politics has left the country fighting over limited resources.[83]

Monarchy

As a Constitutional Monarchy, Malaysia's head of state is considered the paramount ruler, customarily referred to as the king. Kings are elected for five-year terms from among the nine sultans of the Peninsular Malaysian states. The king has ceremonial duties and is also the elder of the Islamic faith in Malaysia.

Executive Authority

The executive branch of the federal government is headed by the prime minister who is appointed by the king. The cabinet members are appointed by the prime minister from among the parliament members with consent of the king. The federal government has authority over foreign policy, defense, internal security, the administration of justice and citizenship.

Legislative Authority

Legislative power in Malaysia is divided between federal and state legislative assemblies. The bicameral parliament consists of the "Dewan Negara" (Senate) and the "Dewan Rakyat (House of Representatives). Among 70 members of the Senate who serve three-year terms with a limit of two terms, 44 are appointed by the king and 26 are elected by the state legislature-two from each state. The 222 members from the House of Representatives are elected from single-member districts by universal adult suffrage to maximum terms of five years. Of these, the vast majority are from peninsular Malaysia, with a smaller number from Sarawak and Sabah.

Legal System

The Malaysian legal system is based on English common law. Under the Constitution of Malaysia, the power of the federation is vested in a Supreme Court, two High Courts – one in Peninsular Malaysia and the other in East Malaysia, and in subordinate courts.[84] Table 4 represents Malaysia's political leadership.[85] Figure 6 represents the government structure in Malaysia.[86]

Title	Name	Appointed
Supreme Head of State (Yang di–Pertuan Agong); Sultan of Kedah	ABDUL HALIM Muadzam Shah ibni al–Marhum Badlishah	13 Dec 2011
Deputy Head of State; Sultan of Kelantan	MUHAMMAD V	13 Dec 2011
Prime Minister; Minister of Finance	NAJIB bin Tun Haji Abdul Razak	09 Apr 2009
Deputy Prime Minister; Minster of Home Affairs	Ahmad Zahid bin HAMIDI	29 Jul 2015
Second Prime Minister for Finance	Ahmad Husni bin Hohamad HANADZLAH	09 Apr 2009
Minster of Foreign Affairs	Anifah bin Haji AMAN	09 Apr 2009
Minister of Defense	Hishammuddin bin Tun HUSSEIN	15 May 2013
Minister of Transport	LIOW Tiong Lai	25 Jun 2014
Minister of Natural Resources and Environment	Wan Junaidi bin Tuanku JAAFAR	29 Jul 2015
Minister of Energy, Green Technology and Water	Maximus Johnity ONGKILI	15 May 2013
Minister of Health	S. SUBRAMANIAM	15 May 2013
Minister of International Trade and Industry	Mustapa bin MOHAMAED	09 Apr 2009
Minister of Education	Mahdzir Bin KHALID	29 Jul 2015
Minister of Agriculture and Agro–Based Industry	Ahmad Shabery bin CHEEK	29 Jul 2015
Minister of Plantation Industries and Commodities	Douglas Uggah EMBAS	15 May 2013
Minister of Science, Technology and Innovation	Wilfred Madius TANGAU	29 Jul 2015
Minister of Tourism and Culture	Mohamad Nazri bin ABDUL AZIZ	15 May 2013

Source: IHS and CIRCA People in Power

Table 4: Malaysia's Political Leaders
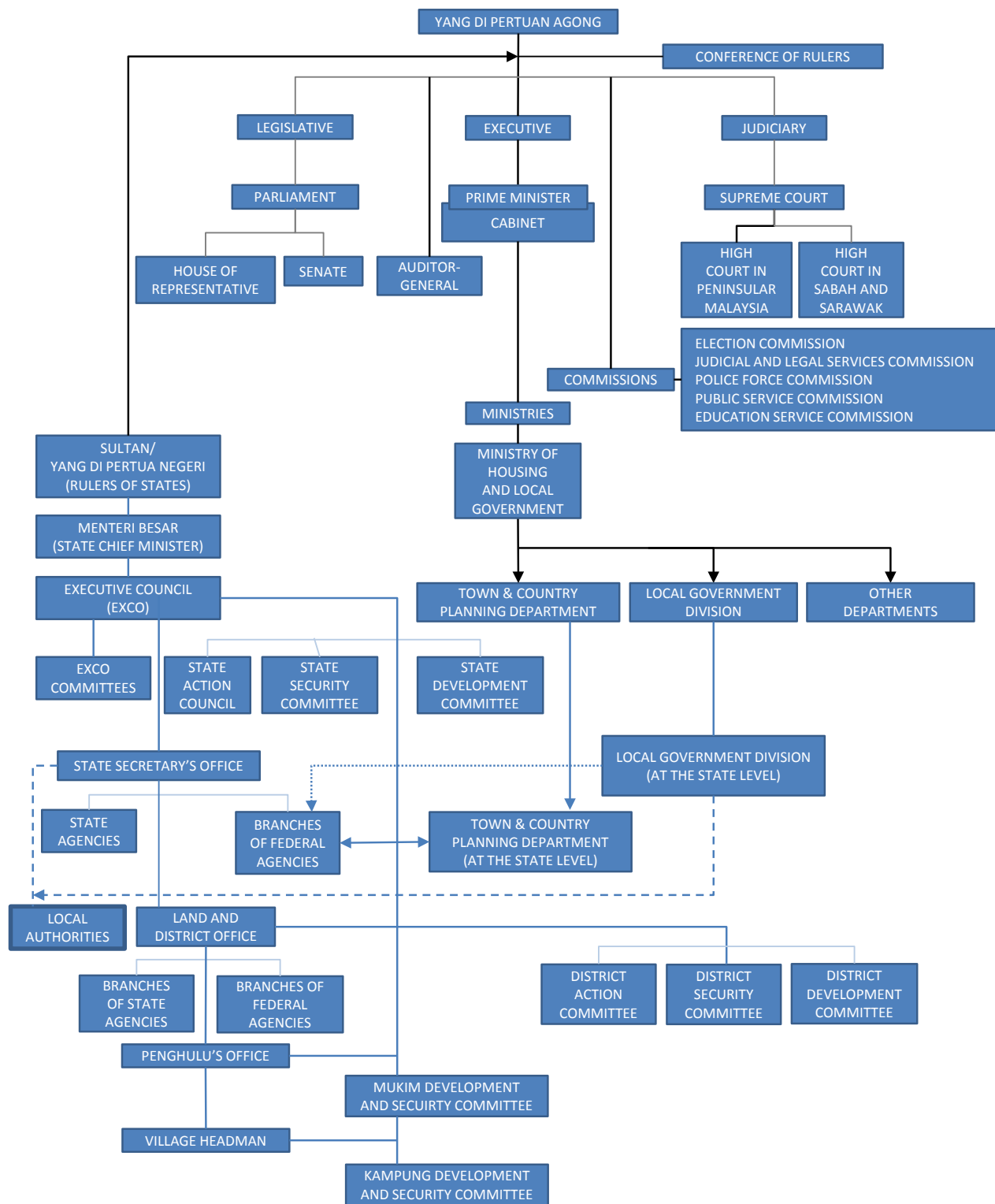
Figure 6: Government Structure in Malaysia

Disaster Management Organizations in Malaysia

The Malaysian Red Crescent Society (MRCS) is the recognized National Society for Malaysia and is a member of the International Federation of Red Cross and Red Crescent Societies (IFRC). It has 160 staff and 230,000 registered volunteers throughout 13 states in Malaysia. MRCS responds and operates in affected disaster areas, providing relief support to affected communities, and has a mandated role to play in disaster response and preparedness as set out in NSC Directive 20.[87]

The National Disaster Relief Fund (Kumpulan Wang Amanah Bantuan Bencana Negara [KWABBN]) provides assistance to disaster victims to enhance the overall resilience of communities to disasters. Through the concept of public–private partnership, other relief funds and microfinance tools are designed to support recovery of affected communities.[88]

The Malaysian Meteorological Service is the agency responsible to provide information and warning occurrences about adverse weather phenomena to the general public through the mass media or to other government agencies directly involved in disaster mitigation. A Central Forecasting Office has been established in the Meteorological Headquarters to closely monitor the weather and sea conditions over the Malaysian region.

The Department of Drainage and Irrigation (DID) is designated to monitor river flow, rain and floods as well as oversee flood mitigation. Flood mitigation plans have been developed for 17 major river basins and 27 towns. Based on these plans, various structural and non-structural measures have been proposed and partially implemented. Such measures include improving river channel sections; building of flood bunds, levees, ring bunds, and by-pass flood ways; use of mining pools for flood attenuation; and construction of flood retention dams to regulate flood flows and minimize flood occurrence.

The Special Malaysia Disaster Assistance and Rescue Team is equipped with specialized skills and equipment to respond to any search and rescue operation in any major disaster on land which is beyond the capabilities of the existing principal emergency services Search and Rescue teams.

The Malaysian Meteorological Department provides information and warning on weather, sea conditions, seismicity and tsunamis. Special emphasis is given to heavy rainfall, strong wind and high waves, intense haze episodes and drought.

The Malaysia Social Welfare Department in Disaster Management is responsible for the following:
- The provision and management of relief/evacuation centers and forward supply base.
- The provision and distribution of relief assistance, which includes food, clothing and other essential items to the affected victims.
- The registration of disaster victims for purposes of rehabilitation.
- The provision of "post-trauma" counseling services to the affected victims.[89]

Community Based Disaster Risk Management in Malaysia

A community based disaster management program has been implemented to disseminate information and raise awareness at community levels. Through collaboration with multiple agencies, the program is implemented to guide participating community stakeholders in identifying the hazards, analyzing and designing disaster management initiatives, and analyzing and determining capacity needs.[90] The disaster management system at the community level is coordinated by the District Officer and the police officer in charge of the district. The district Fire and Rescue Department Officer and representatives from various government departments and agencies at the district level play key roles in disaster management.[91]

International Agencies in Malaysia

International Federation of Red Cross and Red Crescent Societies (IFRC)
P: +60392075700
W: http://www.ifrc.org
Address: The Ampwalk
Suite 10.02 (North Block)
218 Jalan Ampang
50450 Kuala Lumpur

The Asia Pacific Regional Headquarters for IFRC is based out of Kuala Lumpur, with approximately 70 staff working out of its regional office. IFRC is committed to support Malaysian Red Crescent to fulfill its humanitarian mandate in the country and to assist and support the Government of Malaysia as required across the Disaster Risk Management (DRM) spectrum.

International Committee of the Red Cross (ICRC)
P: 603 20841800
W: https://www.icrc.org/en/where-we-work/asia-pacific/malaysia
Address: Unit 50-11-1, Level 11, Wisma UOA Damansara, No. 50 Jalan Dungun, Damansara Heights
50490 Kuala Lumpur, Malaysia

The ICRC responds quickly and efficiently to help people affected by armed conflict. They also respond to disasters in conflict zones, because the effects of a disaster are compounded if a country is already at war. Emergencies are unpredictable, so their rapid deployment capability is hugely important. The ICRC's Kuala Lumpur delegation maintains a dialogue with national and regional bodies on humanitarian issues, International Humanitarian Law, and the mandate and role of the ICRC. They help the Malaysian authorities meet the humanitarian needs of detainees.[93]

United Nations Development Program (UNDP)
UNDP Resident representative for Malaysia, Singapore and Brunei Darussalam
United Nations Development Program
Wisma UN, Block C
Kompleks Pejabat Damansara
Jalan Dungun, Damansara Heights
50490 Kuala Lumpur, Malaysia
T: 603 2095 9122
F: 603 2095 2870
E: registry.my@undp.org
W: http://www.my.undp.org/

UNDP is engaged in supporting Malaysia's national priorities and the implementation of national development plans and long-term development plans such as the 11th Malaysia Plan and other sectoral development

policies and strategies. The Country Program consciously attempts to link strategic policy initiatives with downstream pilot projects so that projects support national development objectives and remain consistent with the national development plans. Through local community based initiatives, UNDP has piloted new and innovative development methodologies that can be adopted and scaled up throughout the country. Today, all UNDP projects in Malaysia are nationally executed, involving more than ten federal ministries and agencies and located in more than six states.

United Nations Children's Fund (UNICEF)
United Nations Children's Fund
Wisma, UN, Block C, 2nd floor
Kompleks Pejabat Damansara
Jalan Dungun, Damansara Heights
50490 Kuala Lumpur, Malaysia
T: 603 2095-9154
F: 603 2093-0582
E: kualalumpur@unicef.org
W: http://www.unicef.org/malaysia/

Since 1954, UNICEF has joined forces with the Government and the people of Malaysia to transform the lives of children across the nation. They have helped achieve improvements in health, nutrition, water and sanitation; formal and informal education; as well as welfare services for children in rural and poor urban areas. UNICEF aligns their priorities with the Five-year Malaysia Plan. UNICEF also directly supports Vision 2020, the culmination of a 30-year national development process.

The United Nations High Commission for Refugees (UNHCR)
P.O. Box 10185, 50706 Kuala Lumpur, Malaysia
570 Jalan Bukit Petaling, 50460 Kuala Lumpur, Malaysia
T: 60 3 2118 4800
F: 60 3 2141 1780
E: mlslu@unhcr.org
W: http://www.unhcr.org.my

UNHCR began its operations in Malaysia in 1975. Today, there are approximately 150 staff members continuing to help over 92,000 refugees and asylum-seekers in Malaysia. During the 1970's and 1980's, UNHCR assisted the Malaysian government in receiving and locally settling over 50,000 Filipino Muslims from Mindanao who fled to Sabah. UNHCR also supported the Malaysian government in locally settling several thousand Chams from Cambodia in the 1980's and several hundred Bosnian refugees in the 1990's.

World Health Organization (WHO)
PO Box 12550 50490- Kuala Lumpur, Malaysia
T: 603 2093 9908
F: 603 2093 7446
E: who.maa@wpro.who.int
W: http://www.who.int/countries/mys/en/

The World Health Organization is the directing and coordinating authority on international health within the United Nations System. This is accomplished by providing leadership on matters critical to health and engaging partnerships where joint action is needed; shaping the research agenda and stimulating the generation, translation and dissemination of valuable knowledge; setting norms and standards and promoting and monitoring their implementation; articulating ethical and evidence-based policy options;

providing technical support, catalyzing change, and building sustainable institutional capacity; and monitoring the health situation and assessing health trends.

International Organization for Migration (IOM)
570 Julan Bukit Petaling 50460 Kuala Lumpur, Malaysia, 50460
Bukit Petaling, Kuala Lumpur
T: 60 3 923 55 40 0
F: 60 3 214 51 09 4
E: iomkualalumpur@iom.int
W: http://www.iom.int/countries/malaysia general–information

IOM first became active in Malaysia in the late 1970's during the Indochinese refugee crisis. IOM provided medical screening and transportation assistance for refugees leaving Malaysia. Refugee resettlement from Malaysia continued until 1994. When resettlement operations ended, IOM continued to help the Malaysian government in implementing an Assisted Voluntary Return Program for unsuccessful asylum seekers. IOM also assisted various Malaysian government agencies, in cooperation with the Economic Planning Unit (Prime Ministers Department), under the German Integrated Expert Program between 1984 and 1995. In 2005, IOM was asked by several of its member states to assist in facilitating the resettlement of refugees from Malaysia, many of whom were from Myanmar. It was also asked to assist stranded migrants and victims of trafficking who wished to return home voluntarily from Malaysia.

U.S. Government Agencies in Malaysia

U.S. Government & Overseas Humanitarian Assistance and Disaster Relief (USAID)

The Department of State (DoS) is the lead U.S. agency in responding to overseas disasters. Within the DoS, the USAID is responsible for coordinating international disaster assistance. Within USAID, the Office of Foreign Disaster Assistance (OFDA) is responsible for coordinating humanitarian assistance. Department of Defense (DOD) involvement in overseas humanitarian assistance and disaster relief operations must be requested and coordinated with USAID through OFDA and the relevant U.S. embassy.

U.S. Embassy
Embassy of the United States Kuala Lumpur
376 Jalan Tun Razak
50400 Kuala Lumpur
Malaysia
T: (011) 60–3–2168–5000
E: klacs@state.gov
W: http:// www.malaysia.usembassy.gov/
Ambassador: Joseph Y. Yun

The Embassy comprises several sections under the Department of State. This includes political, economic, consular, management, public affairs, and Regional Security and Affairs Offices. In addition, several other U.S. government agencies have offices in Malaysia, and constitute part of the larger embassy community.

Defense Attaché Office (DAO)
376 Jalan Tun Razak
50400 Kuala Lumpur
Malaysia
T: (011) 6-03-2168-4827
E: kldao@state.gov
W: http://malaysia.usembassy.gov/office-of-defense-attache.html

The DAO consists of attaches and a professional support staff, and represents the U.S. Department of Defense, the Government of Malaysia and the MAF. As the diplomatic representatives of the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, the Secretaries of the military departments, and the service chiefs, the respective Defense and Service Attaches work with Malaysian military and defense officials on matters of mutual interest. The Senior Defense Official/Defense Attaché is the principal military advisor to the Ambassador on defense and national security issues.

U.S. Office of Defense Cooperation (ODC)
376 Jalan Tun Razak
50400 Kuala Lumpur
Malaysia
T: (011) 6-03-2168-4827
F: (011) 6-03-2141-1080
E: klodc@state.gov
W:http://malaysia.usembassy.gov/odc.html

The ODC manages the following activities with Malaysia in support of the U.S. embassy and U.S. Pacific Command
  • Foreign Military Sales cases for equipment, services and training
  • Military exercises and conferences
  • U.S. Military Education and Training Programs

Participation in International Organizations

Malaysia is a member of a large number of international organizations, including: ADB, APEC, ARF, ASEAN, Bank for International Settlements (BIS), Confederation of International Contractors Association (CICA [observer]), CP, D-8 Organization for Economic Cooperation (D-8), East Asia Summit (EAS), UN Food and Agriculture Organization (FAO), G-15, G-77, International Atomic Energy Agency (IAEA), International Bank for Reconstruction and Development (IBRD), ICAO, ICC, International Committee for Radionuclide Metrology (ICRM), International Development Association (IDA), IDB, International Fund for Agricultural Development (IFAD), International Finance Corporation (IFC), IFRC, IHO, International Labor Organization (ILO), International Monetary Fund (IMF), International Maritime Fund (IMO), International Mobile Satellite Organization (IMSO), International Criminal Police Organization (Interpol), Inter-Parliamentary Union (IPU), ISO, International Telecommunications Satellite Organization (ITSO), International Telecommunications Union (ITU), International Trade Union Confederation (ITUC), Non-Aligned Movement (NAM), Multilateral Investment Guarantee Agency (MIGA), NAM, Organization of Islamic Cooperation (OIC), Organization for the Prohibition of Chemical Weapons (OPCW), PCA, Pacific Island Forum (PIF [dialogue partner]), United Nations, United Nations Security Council (temporary), Africa 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), the World Bank, World Customs Organization (WCO), World Federation of Trade Unions (WFTU), WHO, World Intellectual Property Organization (WIPO), World Meteorological Organization (WMO), and World Trade Organization (WTO).[94]

Malaysia is also a founding member of ASEAN, established in Bangkok in August, 1967, along with Singapore, Indonesia, the Philippines, and Thailand. Malaysia also belongs to the ASEAN Regional Forum (ARF) and Asia-Pacific Economic Co-operation (APEC).

Foreign Disaster Relief and Emergency Response

Disaster Relief Program Description

Pursuant to 10 U.S.C. 404, the DOD can assist foreign countries to respond to man-made or natural disaster situations when necessary to prevent loss of lives. After the local U.S. Embassy has officially declared a disaster, the OFDA assesses the needs and priorities of the country and may request DOD assistance. The assistance may be in the form of transportation, excess property items, Humanitarian Daily Rations (HDR), or some other commodity. The Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) appropriation or USAID may fund transportation of disaster relief.

Foreign Disaster Relief and Emergency Response Program Process

When a foreign country suffers a disaster, it may request assistance through the U.S. Embassy. DoS and OFDA validate the request. If deemed necessary, the DoS requests disaster relief assistance from the DOD. Assistant Secretary of Defense (Special Operations and Low Intensity Conflict) approves the request and forwards it to Defense Security Cooperation Agency (DSCA) for action. DSCA (Programs Directorate) identifies the required supplies (HDRs, Excess Property, etc.) and works directly with the Joint Staff Logistics Directorate (J4) to provide transportation in support of disaster relief efforts.

Congressional Notification for Foreign Disaster Assistance

Not later than 48 hours after the commencement of disaster assistance activities, the President is required by law (10 U.S.C. 404) to transmit a report to Congress containing notification of the assistance (proposed or provided) and a description of the following as is available: the man made or natural disaster for which disaster assistance is necessary; the threat to human lives presented by the disaster; the U.S. military personnel and material resources involved; the disaster assistance provided by other nations or public or private relief organizations; and the anticipated duration of the disaster assistance activities.[95]

Laws, Policies, and Plans on Disaster Management

The policy, NSC Directive No. 20, is the main guideline for disaster management in Malaysia. It is complemented by other sectoral legislations and guidelines that form a disaster mitigation framework. The Directive prescribes the management mechanisms according to the level and complexity of disaster and determines the roles and responsibilities of various agencies to ensure effective coordination and mobilization of resources when handling disasters.

The country's primary development plan–

– the "Five year Malaysia Plan" contributes to DRR by reducing underlying risk factors and promoting sustainable development. Poverty reduction is implemented as part of DRR strategy through explicit policies and programs that are in line with the Millennium Development Goals (MDG) project. The eleventh Malaysian Plan (2016–2020) is presently in effect.[96]

Malaysia has been adopting several strategies to advance progress in mainstreaming DRR:

- **Incorporation of DRR and Climate Change Adaptation** into land use planning system in Malaysia (Town Country Planning Act 1976 [Act 172]) in National Physical Plan at National Level, Structural Plan for State Level and Local Plan, and Special Area Plan at Local Level. Among the content in the National Plan are sustainable water resources management using Integrated Water Resources Management (IWRM) and Integrated Coastal Zone Management (ICZM); Environmentally Sensitive Areas for land use, geohazards and natural resource; and protection of natural barrier (i.e. mangrove) and moving away from areas that are vulnerable to possible rising sea level.
- **Disaster planning and prevention** is integrated into the overall national development plans and projects for sustainable development, accompanied by the involvement of District and State Disaster Management Committees and authorities in the development, testing and implementation of the overall emergency response plans.
- **Poverty reduction** is implemented as part of DRR strategy. With explicit policies and leaders' commitments, the country is way ahead in meeting the MDG target to halve the poverty incidence through programs such as People's Housing Program, Housing Loan Scheme for lower income groups, Housing assistance to the rural poor as well as the empowerment of the poor.
- **Integration between DRR and Climate Change Adaptation** is making significant progress in Malaysia. The National Policy on Climate Change was approved in 2009 to mainstream climate resilient development into different levels of government. It contains several Key Actions that address DRR directly and indirectly through, among others, and integration of DRR in existing and new legislation, policies and plans; mobilization of financing and technical assistance; research, development and establishment of disaster database inventory.

- **National legislation** for disaster management is currently being explored, which is expected to significantly
- emphasize DRR.[97]

Malaysia National Platform and Action Plan on Disaster Risk Reduction

Since the early 1990's the Malaysian government has put in place the policy, infrastructure and operational mechanisms that exceed from the national, state and district levels to ensure participation and involvement of various government agencies and the non-government sector in addressing disaster management.

The Melaka Declaration on Disaster Risk Reduction in Malaysia (2011) captured the future direction of the country on disaster

risk reduction as well as its efforts towards implementing the priority areas for the Hyogo Framework for Action (HFA), 2005-2015. It represented the launching of a campaign to improve the nation's preparedness in facing disasters especially in the context of increasing public awareness and involving the National, Federal, State and local authorities. The declaration called on all levels of government to encourage development of legal and institutional arrangements; to strengthen human resource and capacity for DRR efforts; to integrate DRR into development planning; to enhance coordination and collaboration among stakeholders; and to promote the use of technology in support of early warning, multi-hazards risk assessment, and climate modeling and downscaling.

As part of this effort, the NSC formalized the National Platform for Disaster Risk reduction in 2013. This process involved expanding the array of stakeholders to include policy-makers and practitioners from government, universities, non-governmental organizations as well as representatives from the private sector to take ownership of disaster risk reduction and maintain the continuum between prevention, mitigation, preparedness, response and recovery to support the country's aspiration for sustainable development. This has resulted in Malaysia modifying their disaster management cycle to suit existing legislative directives, promote consistent practices, and accommodate practitioners from multidisciplinary backgrounds. The cycle comprises the following five phases: prevention, mitigation, preparedness, response and recovery. Figure 7 reflects Malaysia's DRR cycle.[98]

Although capacity building in DRR is available among agencies directly involved in disaster management, recent events have shown that there are challenges at the national level. One of the lessons learned after Malaysia's severe flooding in December 2014 was that additional training was needed to build national capacity in Water, Sanitation and Hygiene (WASH). Additionally, a solid working and coordination mechanism with local government agencies and other implementing NGOs was lacking. This coordination is necessary to reduce delays and or duplication of efforts.[99]

Figure 7: Malaysia's Disaster Risk Reduction Cycle

Education and Training

In February 2016, Malaysia is instituting a school preparedness program aimed at minimizing the risks posed by natural disasters.

The school preparedness program purpose is to contribute to disaster awareness and facilitate disaster management planning in schools engaging students in both primary and secondary levels to take responsibility for their own safety as well as the safety of others in the event of a disaster. This program will increase the capacity of schools to respond to natural disasters as well as increase

preparedness on how to remain safe in those situations.[100]

The NSC, in collaboration with other agencies, regularly organizes events and activities to disseminate relevant information on DRR. Disaster Awareness Day has been organized every year since 2005 to raise public awareness on disaster risks as well as promote commitment among country leaders, decision makers and local authorities towards government efforts in disaster management and DRR.

Several programs have been implemented to improve the resilience of schools and hospitals against disasters. The Ministry of Education, in collaboration with civil societies and UNICEF has derived initiatives such as the Smart Support Team and School Watching Program in schools. The Ministry of Education also has the Poor Student's Funds providing monetary assistance and school aids to poor students in the event of disasters.

In conjunction with Disaster Awareness Day 2011, Malaysia launched the national level campaign on "One Million Safe Schools and Hospitals" and organized the ASEAN Knowledge Sharing Workshop on Mainstreaming DRR in Education. The workshop provided the platform for capacity building in mainstreaming DRR in the education sector, particularly in the primary and secondary school curriculum. This workshop facilitated sharing sound practices and lessons acquired by ASEAN member states, assessing DRR in education in the ASEAN region, and determining performance areas of DRR mainstreaming in curriculum and standards that could be adaptable in the region.[101]

Disaster Management Communications
Early Warning Systems

Flood forecasting and early warning systems are put in place to disseminate early warning to the public. It is an integrated system that comprises hundreds of rainfall and water level stations, manual stick gauges, boards and sirens installed at strategic locations all over the country.

A National Tsunami Early Warning System has been developed by the Malaysian Meteorological Department to provide early warning on tsunami threats that may affect the country. With this system, the government is able to forewarn the public of the possible occurrence of tsunamis over the Indian Ocean, South China Sea or the Pacific Ocean. Early warnings are disseminated through sirens, short messaging systems, telephone, telefax, webpage, mass media broadcasting system and public announcements. Malaysia uses Information and Communication Technology (ICT) to promote awareness and disseminate early warnings to the public via a Fixed–Line Disaster Alert System. A separate system known as the Government Integrated Radio Network (GIRN) provides radio communication between responders during emergencies or disasters. Disaster Reporting is very efficient via the Malaysia Emergency Response System (MERS) hotline. To fully capitalize on the potential of using mass media as an effective platform to disseminate disaster preparedness information, the Ministry of Information, Communication and Culture has established a Disaster Unit in the Department of Broadcasting Malaysia.

Dissemination of information and warning on disasters to the public is also done through

government agencies and social networking media (primarily Facebook and Twitter).[102]

Responsible Agencies for Flood and Storm Warning

The Malaysian Meteorological Department is continually monitoring seismic waves, sea level changes and severe weather events as well as haze and drought situations in the country. Atmospheric models have been applied for Quantitative Precipitation Forecasting to enhance reliability and accuracy of forecast, and run in three river basins of Peninsular Malaysia (Pahang, Kelantan, and Johor River basin) to provide real-time flood warning and emergency responses in a convenient lead-time.

The Malaysia Public Works Department, through the National Slope Master Plan has established systems for monitoring landslide risks.

The Drainage and Irrigation Department's Integrated Atmospheric and Radar Satellite Model-Based Rainfall and Flood Forecasting (AMRFF) is also able to provide forecasting and early warning.[103]

Military Role in Disaster Relief

Senior Malaysian military officials have stated that the Southeast Asian region faces three major security threats (maritime security, terrorism, and spillover effects from natural disasters). Malaysia organizes and develops its forces to cope with each of these concerns. The MAF includes the three service branches: Malaysian Army, Royal Malaysian Air Force, and the Royal Malaysian Navy. The MAF is a volunteer force with 110,000 active personnel and 296,300 reserves.

There is presently no mandate (at the time of writing this document) for the MAF to assist in peacetime. However, they have been involved in peacekeeping missions with the United Nations in many countries. The U.S. and Malaysia share a strong military-to-military relationship with numerous exchanges, joint exercises, and visits. The Five Power Defense Arrangement between Malaysia, Singapore, Australia, New Zealand, and the United Kingdom, is a regional security initiative, which has been in place for almost 40 years. It involves joint military exercises held between the five countries. The MAF has no legal authority to enforce domestic law. However, recent legislation (NSC Bill 2015) would formalize Military assistance in peacetime contingencies. It was drafted and passed by Parliament and is now in upper house review. If approved, it will formally authorize the military to assist.[104]

Among military services, the Army and the Air Force plays the leading role in Humanitarian Assistance and Disaster Relief (HADR) in Malaysia and abroad. This is primarily due to their leadership qualities and active participation in emergency operations locally and abroad. Internationally the most notable HADR missions undertaken by the Army include the Afghan Refugees medical assistance in Chaman/Pakistan in 2001/2002, Aceh-Indonesia Tsunami Assistance in 2004, Battagram-Pakistan Earthquake assistance in 2005/2006, and Bantul-Indonesia Earthquake Assistance in May 2006. The Royal Malaysian Air Force has most recently supported Nepal earthquake relief in 2015 and remote relief operations after Typhoon Haiyan in the Philippines in 2013.[105]

From a military perspective, providing assistance to civil authorities is perceived as a secondary task of the army today, as

being part of a more open and democratic society means greater participation in civilian and overall nation–building activities. The MAF's contribution to HADR missions lies in its ability to estimate the consequences of disasters and the major risk factors for human casualties. They also supply experts such as explosive specialists, engineers, divers, search and rescue teams, and air medical personnel.[106]

The Malaysian Army is divided into five Divisions and placed under the Field Army Headquarters. Three of these (the 2nd, 3rd and 4th Divisions) are based on the Malaysian peninsula, while the other two (the 1st and 5th Divisions) are based on Malaysian Borneo. The Grupa Gerak Khas (Special Forces group), 10th Parachute Brigade and the Pasukan Udara Tentera Darat (army aviation) are independent formations and are directly subordinate to the Chief of the Army. The Malaysian Army rank structure has 17 levels from Private (Prebet) to General (jeneral). These ranks are divided into two groups – Officer and Other ranks, which includes the Non–Commissioned Officer ranks. These are grouped into 3 main components: the Combat Element, the Combat Support Element, and the Support Elements.[107]

Foreign Assistance and International Partnering

The U.S. Government, through the U.S. Agency for International Development, provided $50,000 through the Malaysian Red Crescent Society to support emergency flood relief efforts in January 2007. These activities included the local purchase of relief supplies and logistical support for flood–affected populations. This help alleviated conditions resulting from severe flooding in southern peninsular Malaysia, particularly Johor and Pahang. Some areas were submerged under three meters of water. The flooding killed at least 17 people, forced the evacuation of more than 100,000 others and caused more than $28 million in property damage.[108]

Malaysia and Indonesia signed a Memorandum of Understanding (MoU) on Disaster Cooperation and Assistance on 11 December 1997. This allowed the two countries to work together to manage and handle any forms of disaster that may occur. The MoU was signed by the National Disaster Management and Relief Committee Chairman as well as the Minister of Information on behalf of the Malaysian government and the Coordinating Minister for People's Welfare. Additionally, the chairman of the Indonesia National Disaster Management Coordinating Board signed on behalf of the Indonesian government. Under this MoU both countries agreed to the following:

- Exchange of expertise and information on the latest technology related to disaster prevention, risk reduction, response, mitigation, recovery and rehabilitation including teledetection.
- Training of officers and personnel in disaster management, the concept of aeromobility emergency services and search and rescue techniques on both land and sea.
- Sharing of experience through seminars, conferences and publications on disaster management.
- Collaboration on public health studies related to the effects of particular disasters.

In the agreement between the Government of Malaysia and the Government of the French Republic on Co-Operation for Disaster Prevention and Management and Public Safety, France and Malaysia agreed to:

- Share their public health experiences, especially with regard to chemical, industrial and environmental hazards.
- Exchange information on each country's laws and regulations pertaining to environment pollution and hazards.
- Exchange technology and scientific information relating to natural, man-made and technological disasters or major incidents through electronic media, forum and publications.
- Participation of specialists of one party in the relevant national technical training programs of the other party.

The ASEAN Humanitarian Assistance (AHA) Center for Disaster Management has trained eight Malaysia personnel as members of the ASEAN Emergency Response Assessment Team (ERAT). Additionally, four personnel have attended the AHA Center Executive (ACE) course.[109]

Malaysia hosted the 2015 (ARF Disaster Relief Exercise [DiREX]) in the state of Kedah and Perlis. It was co-organized by the Government of Malaysia and the Government of the People's Republic of China. This biennial simulation event was designed to facilitate disaster response coordination mechanisms between ASEAN and other states in the Asia-Pacific Region as well as international humanitarian players.[110]

United Nations Humanitarian Response Depot

As part of its efforts to ensure a rapid response to humanitarian emergencies around the world, USAID's Office of U.S Foreign Disaster Assistance stores relief supplies at regional warehouses. The Asia-Pacific United Nations Humanitarian Response Depot (UNHRD) is located in Subang, Malaysia and managed by the World Food Program (Photo 7).[111]

Photo 7: UNHRD Warehouse in Subang, Malaysia

It forms part of an international network that includes Dubai (UAE), Brindisi, (Italy), Accra (Ghana), Panama City (Panama), and las Palmas (Spain). UNHRD Subang holds strategic reserves of emergency non-relief goods, including medical kits, shelter items, IT equipment and other materials designed to assist the emergency response. Additionally, the UNDRD also hosts a variety of training that provides participants with first hand, practical response experience (Photo 8).[112]

In 2014, the Kuala Lumpur depot dispatched 12 consignments (value of goods worth $920,000) which supported humanitarian interventions in six countries. The depot was built in 2012 and was made available to UNHRD by the Government of Malaysia.

The UNHRD has been instrumental to fourteen natural disasters in its first four years. This includes the 2012 Mandalay earthquake, massive flooding in Laos in 2013, the super typhoon that hit the Philippines in

**Photo 8: UNHRD Training Classroom
in Subang, Malaysia**

November 2013 and very recently Myanmar in 2015. The establishment of the warehouse is the first phase of the Disaster Emergency Logistics System for ASEAN (DELSA), which aims to set up satellite warehouses throughout the region. These will supplement the existing regional hub in Kuala Lumpur and ensure quicker availability of emergency relief items. This will represent the first regional network of humanitarian response depots in ASEAN that will further enhance the capacity of ASEAN National Disaster Management Organizations to better respond to emergencies.[114]

UNHRD offers standard and specific services. Standard Services are offered at no cost to partners and include the routine management of stock from the point of receipt at a UNHRD depot and during the period of storage. Specific tasks, services, and activities are provided to partners upon request and on the basis of full cost recovery.

Standard Services include:
- Customs clearance
- Receipt of stocks
- Inspection of stocks
- Storage
- Handling
- Routine storekeeping
- Minor repairs
- Storage of drugs
- Loan and borrow facility
- Identification of suitable packaging
- Stock reports

Specific services include:
- Management of drugs
- Management of dangerous goods
- Handling and ramp assistance for air operations
- Handling of sea/land shipment
- Kitting
- Repackaging due to major damage
- Procurement of emergency relief items
- Procurement of transport services
- Repair and refurbishment of 2nd hand assets
- Disposal of assets
- Technical assistance in the field
- Extraordinary physical count
- Vehicle maintenance
- Palletization

The AHA Center maintains its emergency stockpiles in Subang to provide relief items to affected member states during disasters. Users of the Subang UNHRD facility include ASEAN, AusAID, CARE, Irish Aid, JICA, Mercy Corps, Norwegian Church Aid, Swiss Red Cross, Shelterbox, WHO and World Vision International.[115]

Malaysia
Infrastructure

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Infrastructure

Airports

The main gateway to Malaysia is through the Kuala Lumpur International Airport (KLIA) at Sepang located approximately 50 kilometers south of Kuala Lumpur. It is the 23rd busiest airport in passenger traffic in the world, a southeast Asian hub with 27 airlines and the airport hosts around 35 million passengers annually. The Sultan Abdul Aziz Shah Airport in Subang serves a few domestic and regional airlines.   Other international airports that serve as entry points in Malaysia are Penang, Kuching, Kota Kinabalu, and Langkawi. Table 5 shows Malaysia's airports.[118]

Seaports

Malaysia is a maritime country located in an important maritime crossroads, serving a high maritrade volume annually. Currently, there are the following seven major federal ports: Port Klang, Penang Port, Bintulu Port, Johor (Pasir Gudang) Port, Port Tanjung Pelepas, Kuantan Port and Kemaman Port. The maritime trade business is growing especially in the Port of Tanjung, Pelepas and Port Klang. These two ports are experiencing an annual growth rate of 8.64 percent and 11.63 percent respectively.[119] All major federal ports except Kemaman, are privatized.

Port Klang is situated about 40 km from Kuala Lumpur. It is considered a national load center and a regional hub. Its geographical location makes it the first port of call for ships on the eastbound leg and the last port of call on the westbound leg of the Far-East-Europe trade route. Its operations include container terminals, general, dry bulk, liquid bulk and passenger handling.

The **Port of Penang** is located on the northwestern coast of the Malaysian peninsula close to borders with Thailand. It is directly connected to the North-South and East-West highways as well as to all lines. It serves as both a container and passenger terminal.

Bintulu port is situated in the central west coast of Borneo in the Sarawak province. It is the main port of the Sarawak region but serves some cargo for Sabah and Brunei. It operates general, dry bulk and container facilities.

Port of Tanjung Pelapas is located on the southwestern tip of the Malaysian peninsula. It is directly connected to the Malaysia-Singapore Highway and also connects to the Malaysian railway network, offering a gateway to Thailand's industrial regions. It serves primarily as a facilitator of the container market.

Kuantan Port is located on the central eastern coast of peninsular Malaysia (East Coast Industrial Corridor). Nearby areas of Gebebg, Pahang and Kertih host major petrochemical plants. A large volume of petrochemical and liquid bulk products is transferred through Kuantan Port making it a major petrochemical gateway.

Johor Port is located close to Port of Tanjung Pelapas. It is a diverse port aiming towards both bulk and container freight facilitation. It provides dedicated berths and facilities to handle palm oil, petroleum and petrochemical products as well as dry bulk and general cargo.[120]

Kemaman Port is located on the east coast of Malaysia in the state of Terengganu. It is one of the deepest ports in Malaysia and fast emerging as the new gateway to the Asia Pacific Region. As a deep-sea all-weather port operating year round, it is capable of handling vessels and various types of cargo.[121]

Town	Airport Name	ICAO	IATA	Usage	Customs	Runway	IFR	Runway Length
Alor Setar	Sultan Abdul Halim	WMKA	AOR	Civ.		Paved	Yes	6400 ft
Bario	Bario	WBGZ	BBN	Civ.		Unpaved	No	2500 ft
Bintulu	Bintulu	WBGB	BTU	Civ.	O/R	Paved	Yes	4500 ft
Butterworth	Butterworth	WMKB	BWH	Mil.	Yes	Paved	No	8000 ft
Gong Kedak	Gong Kedak	WMGK		Civ.	Yes	Paved	Yes	6600 ft
Ipoh	Sultan Azlan Shah	WMKI	IPH	Civ.		Paved	Yes	5900 ft
Johor Bahru	Sultan Ismail	WMKJ	JHB	Civ.	Yes	Paved	Yes	11000 ft
Keningua Malaysia	Keningua	WBKG		Civ.	No	Unpaved	No	2800 ft
Kerteh	Kerteh	WMKE	KTE	Mil.		Paved	Yes	4500 ft
Kluang	Kluang	WMAP		Civ.		Unpaved	No	4100 ft
Kota Bharu	Sultan Ismail Petra	WMKC	KBR	Civ.	No	Paved	Yes	6400 ft
Kota Kinabalu	Kota Kinabalu	WBKK	BKI	Civ.	Yes	Paved	Yes	9800 ft
Kuala Lumpur	Kuala Lumpur Intl – Sepang	WMKK	KUL	Civ.	Yes	Paved	Yes	13500 ft
Kuala Lumpur	Simpang	WMKF		Civ.		Paved	No	6100 ft
Kuala Lumpur	Sultan Abdul Aziz Shah–Subang	WMSA	SZB	Civ.	Yes	Paved	Yes	12400 ft
Kuala Terengganu	Sultan Mahmud	WMKN	TGG	Civ.		Paved	Yes	6600 ft
Kuantan	Kuantan	WMKD	KUA	Mil.	Yes	Paved	Yes	9200 ft
Kuching	Kuching Intl	WBGG	KCH	Civ.	Yes	Paved	Yes	8000 ft
Labuan I	Labuan I	WBKL	LBU	Mil.		Paved	Yes	7500 ft
Lahad Datu	Lahad Datu	WBKD	LDU	Civ.		Paved	Yes	4500 ft
Langkawi I.	Langkawi Intl	WMKL	LGK	Civ.	Yes	Paved	Yes	12500 ft
Lawas	Lawas	WBGW	LWY	Civ.		Paved	No	2200 ft
Limbang	Limbang	WBGJ		Civ.		Paved	No	1900 ft
Malacca	Malacca	WMKM	MKZ	Civ.	Yes	Paved	Yes	4500 ft
Marudi	Marudi	WBGM	MUR	Civ.		Paved	No	2900 ft
Miri	Miri	WBGR	MYY	Civ.	No	Paved	Yes	6900 ft
Mukah	Mukah	WBGK	MKM	Civ.		Paved	No	3500 ft
Mulu	Mulu	WBFC		Civ.	No	Paved	No	3900 ft
Penang I	Penang Intl	WMKP	PEN	Civ.	Yes	Paved	Yes	11000 ft
Sandakan	Sandakan	WBKS	SDK	Civ.	Yes	Paved	Yes	6900 ft
Taiping	Taiping	WMBI	TPG	Civ.		Paved	No	4300 ft
Tawau	Tawau	WBKW	TWU	Civ.		Paved	Yes	5600 ft

Table 5: Malaysia Airports

*Explanations On Technical Data for Table 4: Malaysia Airports	
ICAO-code: International Civil Aviation Organization (ICAO), a 4-letter airport location indicator. The field above is left blank if no ICAO location indicator is available for the selected airport.	
IATA-code: International Air Transport Association (IATA), a 3-letter identifier for the relevant airport. The field above is left blank if no IATA code is available for the selected airport.	

Usage:
Airports are classified in three categories: civil airports open for public use, military airports and private airports not open to the public. Airports that are joint use, both civil and military, are shown as civil airports.

Civ	Civil airport, open for public use (including joint use).
Mil.	Military airport, not open for public use.
Priv.	Private airport, not open for public use.

Customs:

Yes	Customs service available during airport operating hours.
No	Customs service not available.
O/R	Airport has customs service; prior notification is required.
Pto.	Airport has part-time customs service available, not necessarily identical to the airport hours.
ADCUS	An airport within the USA for which the FAA 'ADCUS' method of prior notification may be used.
ADCUS O/R	An airport within the USA for which the FAA 'ADCUS' method of prior notification may be used but where restrictions apply.

Runway:
Identification of the surface of the longest runway available:

Paved	Paved (hard surface) runway
Unpaved	Unpaved (soft surface) runway (Only lighter aircraft)
Water	Water (for float planes)

IFR:

Yes	Instrument approach procedure is published.
No	Instrument approach procedure is not published. (Airport not suitable for traffic during bad weather or darkness.)

Runway Length:
Shows the length in feet of the longest runway available at the selected airport, rounded down to the next full hundred feet. If the airport has both hard (paved) and soft (unpaved) runways, the length of the longest hard surface runway is shown. If the longest runway is both, hard and soft surface, the length of the hard surface portion is shown.

Figure 8: Map of Malaysian Seaports

Figure 8 depicts a map of all Malaysia seaports.[122] The dots represent all the seaports in Malaysia and the boxes surrounding the seaport name notate the main seaports.

Land Routes
Roads

Most of Malaysia's 80,000 km of paved roads are found in western Peninsular Malaysia.[123] The country's road network is comprehensive and serves all parts of the peninsula, while road upgrading continues in Sabah and Sarawak. Kuala Lumpur has historically suffered from congestion, but the opening of a light railway system across the city has significantly alleviated the problem. Buses serve all significant towns.

Since the mid-1990s, Malaysia has experienced a huge increase in car ownership due to a surge in wealth, access to easy credit, the government's determination to develop an indigenous car manufacturing industry, and the country's relatively easy passage through the late 1990s Asian economic crisis. Kuala Lumpur is one of the most car-dependent urban centers in Asia. Photo 9 shows an example of this.[124]

Government priorities to encourage ownership of locally produced cars, coupled with often long commuting distances, have restricted the ability of public transport to compete on all but the most densely travelled routes. This results in high levels of congestion. The government solution to congestion has been to build more roads, many of them tolled, and all owned and operated by companies with strong links to the ruling coalition.

Photo 9: Federal Highway, Kuala Lumpur, Malaysia

They are also restructuring the public transportation system along the densely populated Klang valley in a bid to cut car-commuting journeys to Kuala Lumpur and to encourage increased use of the bus and rail transport systems.[125]

Bridges

Bridges are an important element in establishing communication links between towns and cities that are separated by difficult terrains or rivers. Bridges have been important in the economic and social development of Malaysia, enabling transportation links in moving people and goods.

The building of bridges has evolved from simple wooden structures to sophisticated steel and concrete bridges. Bridges have played a major role in industries like tin mining, rubber and the general overall economy. Table 6 lists select bridges in Malaysia.[126] Photo 10 is a picture of Penang Bridge in Penang, Malaysia.[127] Penang is one of the Islands of Northwest Malaysia.

Railways

Keretapi Tanah Melayi is Malaysia's privatized railway company. It is modern, economical and comfortable, although there are only two lines and most services are slow. One line runs up the west coast from Singapore, through Kuala Lumpur, Butterworth and on into Thailand. The other branches off from this line at Gemis and runs through Kuala Lumpur up to the northeastern corner of the country near Kota Bharu in Kelantan. This line is the East-Coast line. In Sabah, the North Borneo Railway, a small narrow-gauge line runs through the Sungai Padas gorge from Tenom to Beaufort.

There are two main types of rail services:

Photo 10: Penang Bridge

Bridge	Location	Description
Merdeka	Kedah	Spans the Sungai Muda, the longest river in Kedah. It serves as a major link for transportation of goods and people.
Victoria	Perak	The oldest railway bridge in Malaysia. Connects the whole of the west coast from Perai to Johor Baru. It is over 1000 feet long.
Sungai Segamat	Johor	It is a Steel Pratt girder bridge with a length of 99.43 meters. Provides railway crossing over the Segamat River.
Penang	Penang	This bridge is a vital link connecting Penang Island and Perai on the mainland of West Malaysia with a total length of 13.5 kilometers.
Jambatan Kota	Klang	It is a double decker bridge that links the divided city of Klang. It includes a pedestrian walkway at the lower half.

Table 6: Select Bridges in Malaysia

express and local trains. Express trains stop only at main stations, while local trains, which operate mostly on the east-coast line, stop everywhere, including the middle of the

jungle, to let passengers and their goods on and off. Therefore, local trains take more than twice as long as express trains and run on erratic schedules.[128] Figure 9 represents the railway route in Malaysia.[129]
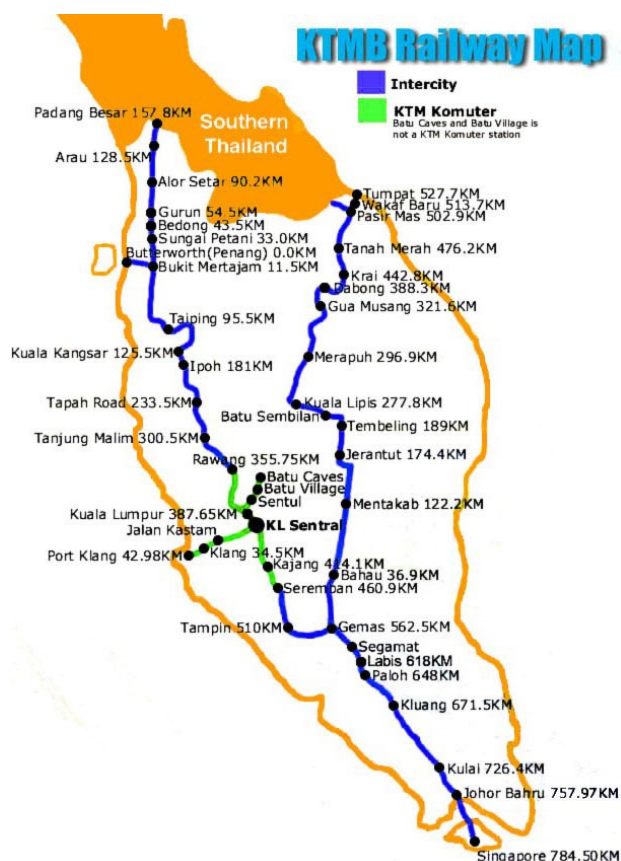

Figure 9: Map of Malaysian Railways

Waterways

Malaysia has 7,200 Km (4,500 miles) of waterways. This includes 3,200 Km (2,000 miles) in Peninsular Malaysia, 1,500 Km (1000 miles) in Sabah and 2,500 Km (1500 miles) in Sarawak. Malaysia ranks 19th worldwide in terms of the size of their waterways.[130] A key focus for the government is the protection of the Strait of Malacca, which serves as a vital artery for Malaysian commercial activity and is bordered by Indonesia, Singapore and Thailand. The primary security threat stems from piracy, although Malaysia is trying to ensure that any responses do not impinge on its sovereignty in the area.

Schools

Public schools in Malaysia (Photo 11) are in abundance and the tuition fees are quite low as the majority of schools are supported by the government.

Photo 11: Malaysia Public School Classroom

Facilities in public schools are adequate and have the majority of the basic items needed for education. However, student to teacher ratios can be quite high, with 40 to 50 students in a class.

There are a number of good private schools in Malaysia, but they are known to be expensive. Private schools usually practice three terms per year, with three major exams each term. As with public schools, private schools follow the guidelines and rules set by the Malaysian Ministry of Education.

Communications

Due to sustained private investment, Malaysia possesses advanced telecoms and internet sectors.

The Malaysian Communications and

Multimedia Commission acts as the primary regulator for the sector. Although the industry is privatized and saturated with competition, the government has put through many initiatives to capitalize on growth and plans for the future. Government policy on the telecoms industry has been driven by its Vision 2020 policy. The plan is to achieve this by attracting advanced IT and multimedia companies to the country, which will in turn filter through to the telecoms sector and expand the related infrastructure.

Utilities
Power

There are several electricity suppliers in Malaysia who serve the different areas of the country. Electricity in peninsular Malaysia is distributed by Tenaga Nasional, while the state of Sabah is served by Sabah Electricity, and the state of Sarawak by Syarikat Sesco. The voltage in Malaysia is 240v with a frequency of 50 hertz. In rural areas, it can sometimes alternate between 220v and 240v. The electricity supply in Malaysia is very good. However, there are occasional power cuts.[133]

The dominant fuel source is gas, which contributes more than half of the national energy demand. Alongside its population boom, the demand for electricity will naturally increase. The state-owned Petronas, which is among the largest companies in Malaysia, dominates the country's oil industry through partnerships with other international players, particularly in the exploration sector. Petroleum giants (British Petroleum and Shell) also operate in the country. The Malaysian Oil and Gas Services Council is the leading trade association in the sector.[134]

Water and Sanitation

The popluation of Malaysia uses improved drinking water sources. In the late 1980's and 1990's, several public-private partnership projects were implemented in the water supply and sanitation sector, including three build-operate-transfer style water supply projects between 1987-89, and one build-operate transfer-style sewage project in 1992.[135]

The National Water Services Commission is the national regulatory body for water supply in the country. The biggest issue involving water supply is to change the national habit of having a high water usage per person, and to maintain the infrastructure, which can meet a booming country's present and future demands. Malaysia's Water Resources Master Plan sees the development of water resources for the country up to 2050 as involving around 60 major water projects, including new dams, raising existing ones, new treatment plants, inter-state water transfer, and identifying catchment areas for development.[136]

Although plentiful at this time, rates of water wastage in domestic, industrial and agricultural use are very high and this is unsustainable in the long term. Compared to other countries, Malaysia uses and wastes too much water.[137]

Malaysia lacks a central agency to manage the overall aspects of water resource management.[138] Water utilities in Malaysia are managed and overseen by individual state water authorities. Tap water is safe to drink in major towns or cities. Most Malaysians in towns and villages have a habit of boiling their drinking water. Imported mineral water and bottled water is available for purchase.[139]

Malaysia
Health

Malaysia Disaster Management Reference Handbook | 2016

Health Overview

Malaysia is burdened with communicable (i.e. tuberculosis, HIV, dengue) and non-communicable diseases (NCD) (i.e., cardiovascular diseases, cancer, diabetes). In addition, the prevalence of NCD and NCD risk factors continues to rise.

Malaysia has almost achieved most targets set for child health, adolescent birth rate, antenatal coverage, HIV/AIDS and malaria under the MDGs. Some challenges remain in certain MDG indicators that will require detailed understanding of local dynamics and augmentable policies. Table 7 shows data regarding the current health indicators in Malaysia including life expectancy.[140] Figure 10 represents the top ten causes of death in Malaysia (2012).[141]

Contributions to the good health status include the following:[142]

- **safe water** supply and sanitation
- **child** immunization
- **nutrition** and growth monitoring
- **harm**-reduction strategies to curb the spread of HIV among drug users
- **extensive** coverage by the integrated Private Healthcare System

Life expectancy at birth (2013)	76
Human Development index rank out of 186 countries (2012)	64
General expenditure on health as % of total government expenditure (2013)	4%
Private expenditure on health as % of total expenditure on health (2013)	45.2%

Table 7: Current Health Indicators

Structure

Malaysia is working towards becoming a progressive and high-income nation by 2020, as outlined in the 10th Malaysian Plan (10MP) 2011-2015. The 10MP and the Country Health Plan 2011-2015 contain new policy directions, strategies and programs that stress quality healthcare and a healthy community. They provide a strategy that is geared towards the establishment of a comprehensive healthcare system as well as a public recreational and sports infrastructure to support active lifestyles.

The Malaysia health planning process has evolved from a top-down pragmatic approach into a mixed top-down, bottom-up process that is evidence based. At the end of the Seventh Malaysia Plan (7MP), a more systematic approach to evaluating of plans was initiated. Translation of policy-to-practice approach was then developed and utilized in the Eighth Malaysia Plan (8MP) with systematic monitoring and evaluation. The objectives and strategies became measurable and created opportunities for greater integration of various health and health related agencies. Consequently, a strategic planning approach was introduced during the Ninth Malaysia Plan (9MP). In the Mid Term Review of the 9MP, the outcome-based evaluation was started. Figure 11 represents the directions, strategies and programs of the 10MP planning approach on healthcare in Malaysia.[143]

The Ministry of Health (MOH) has been assigned to provide a more efficient and effective health system that ensures universal access to quality healthcare. In line with this, the MOH is reviewing its conceptual framework for the health system, including aspects of health services delivery, financing,
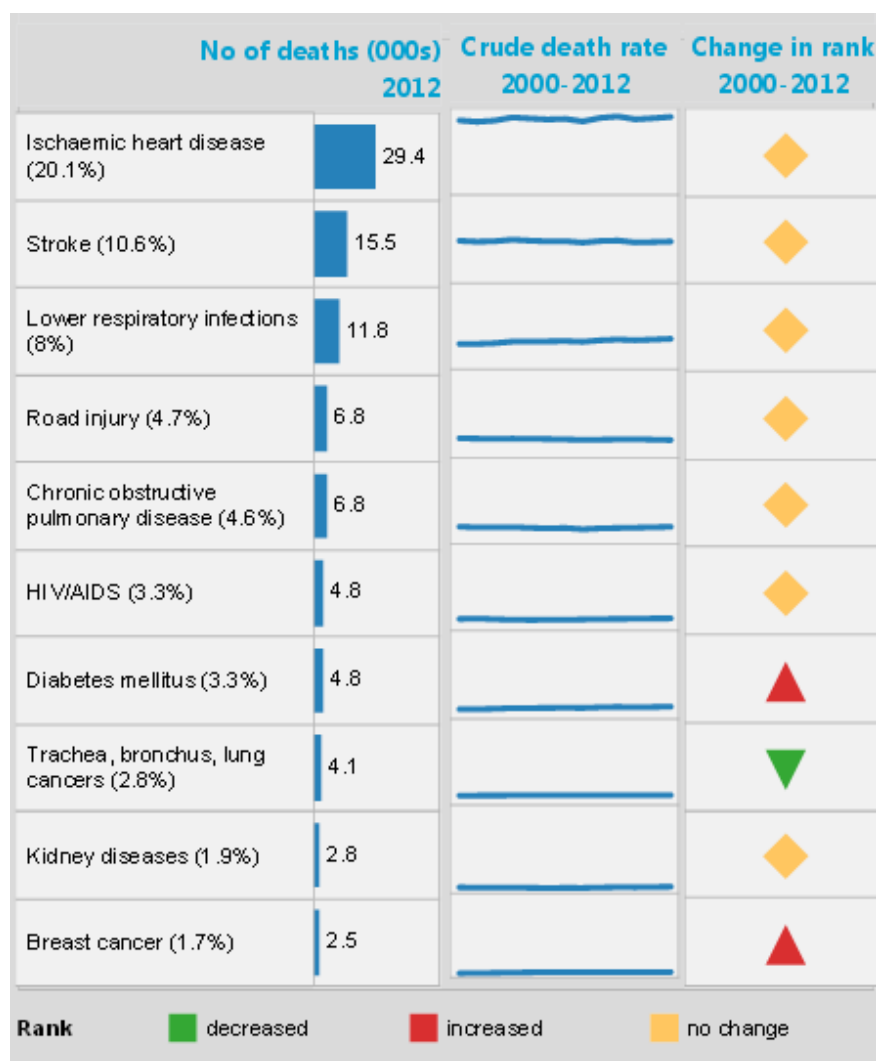
	No of deaths (000s) 2012	Crude death rate 2000-2012	Change in rank 2000-2012
Ischaemic heart disease (20.1%)	29.4		◆
Stroke (10.6%)	15.5		◆
Lower respiratory infections (8%)	11.8		◆
Road injury (4.7%)	6.8		◆
Chronic obstructive pulmonary disease (4.6%)	6.8		◆
HIV/AIDS (3.3%)	4.8		◆
Diabetes mellitus (3.3%)	4.8		▲
Trachea, bronchus, lung cancers (2.8%)	4.1		▼
Kidney diseases (1.9%)	2.8		◆
Breast cancer (1.7%)	2.5		▲

Rank ■ decreased   ■ increased   ■ no change

Figure 10: Top 10 Causes of Death in Malaysia

enabling structures and its governance. The Disease Control Division of the MOH launched various DRR-related programs including:[144]

- **Flood Management Program** to reduce the morbidity and mortality among the flood victims through prevention and control activities before-, during- and post-flood.
- **National Strategic Plan for Emerging Diseases.** The division also has strengthened its capability on detection and response to emerging disease and public health emergencies.
- **Action Plan for Haze** documented a time bound guide for preparedness and response

plan for haze. It contains specific advice and actions to be taken by the ministry, other government agencies and non-government agencies to ensure that resources are mobilized and used efficiently.

- **Food Safety Emergency Response Plan on food-borne illness**
- **Rural Environmental Sanitation Program for water supply and sanitation related disease**

Malaysia has implemented the National Strategic Plan for Non-Communicable Diseases (NSP-NCD) 2011-2015, where steps have been taken for policy and regulatory interventions, working with stakeholders outside of the health sector, in trying to create a health-promoting environment throughout the country. Malaysia has fulfilled International Health Regulations (IHR) 2005 criteria and has ratified the WHO Framework Convention on Tobacco Control (FCTC) and made some inroads in its implementation.[145]

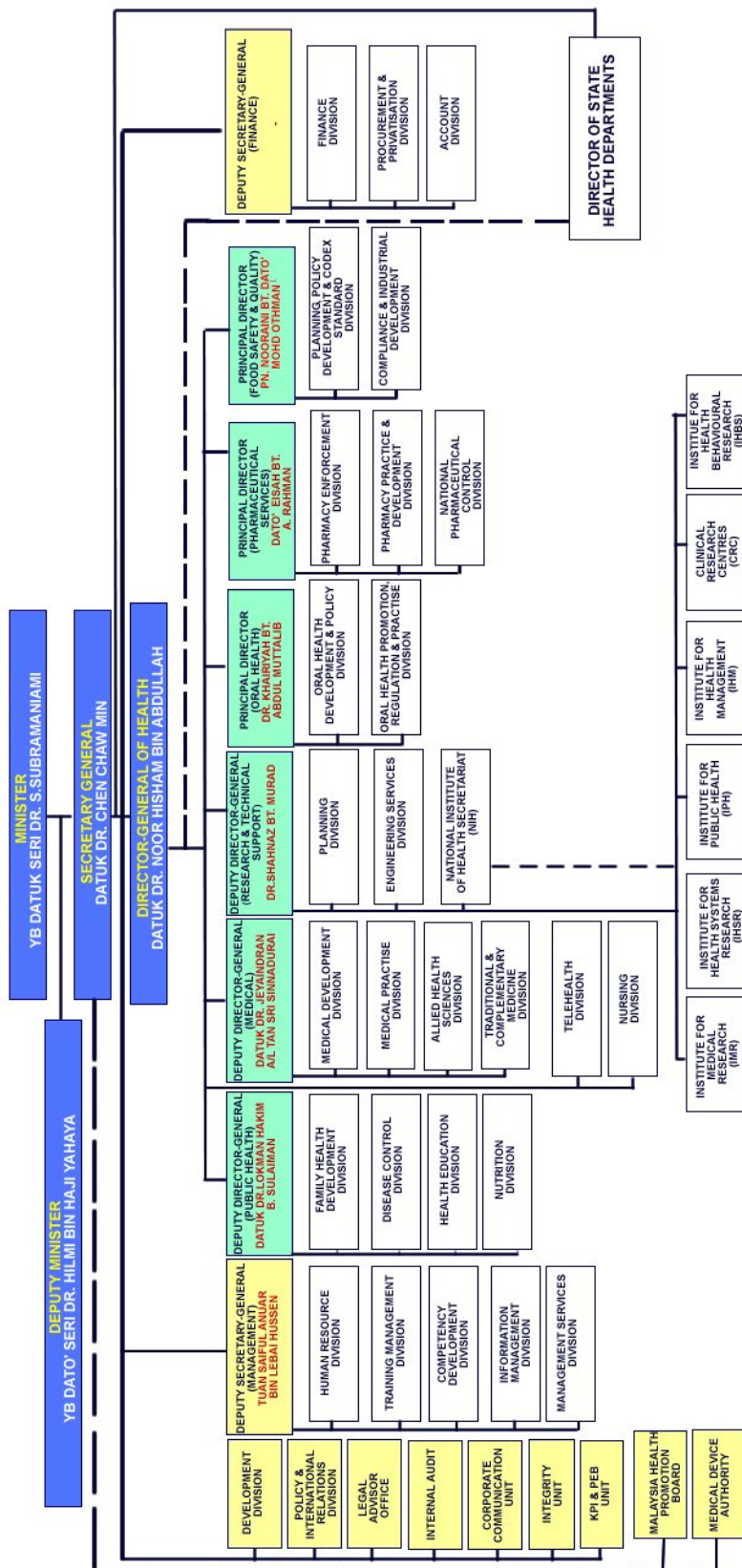The WHO Country Cooperation Strategic Agenda (2009-2013 extended to 2015 to facilitate alignment with Malaysia's 11th National Development Plan) can be found in Table 8. It discusses the strategic priorities as well as focus areas.[146] Figure 12 represents the MOH structure.[147] The MOH is also involved in promotion and awareness programs.
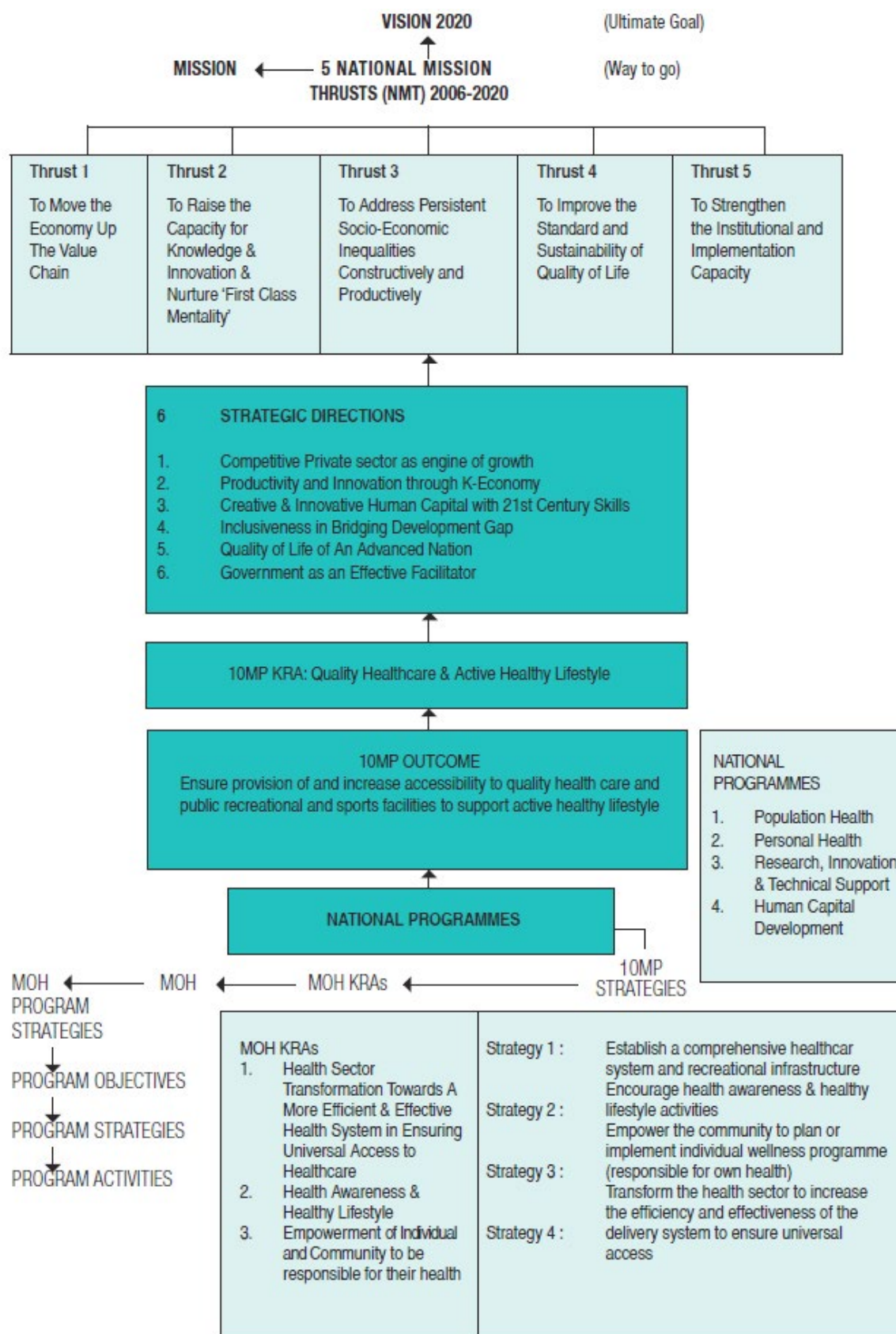
Figure 11: Flow Chart on the 10th Malaysia Plan Planning Approach

MINISTRY OF HEALTH ORGANISATION CHART

MINISTER
YB DATUK SERI DR. S.SUBRAMANIAM

DEPUTY MINISTER
YB DATO' SERI DR. HILMI BIN HAJI YAHAYA

SECRETARY GENERAL
DATUK DR. CHEN CHAW MIN

DIRECTOR-GENERAL OF HEALTH
DATUK DR. NOOR HISHAM BIN ABDULLAH

DEPUTY SECRETARY-GENERAL (FINANCE)
- FINANCE DIVISION
- PROCUREMENT & PRIVATISATION DIVISION
- ACCOUNT DIVISION

DIRECTOR OF STATE HEALTH DEPARTMENTS

PRINCIPAL DIRECTOR (FOOD SAFETY & QUALITY) PN. NOORAINI BT. DATO' MOHD OTHMAN
- PLANNING, POLICY DEVELOPMENT & CODEX STANDARD DIVISION
- COMPLIANCE & INDUSTRIAL DEVELOPMENT DIVISION

PRINCIPAL DIRECTOR (PHARMACEUTICAL SERVICES) DATO' EISAH BT. A. RAHMAN
- PHARMACY ENFORCEMENT DIVISION
- PHARMACY PRACTICE & DEVELOPMENT DIVISION
- NATIONAL PHARMACEUTICAL CONTROL DIVISION

PRINCIPAL DIRECTOR (ORAL HEALTH) DR. KHAIRYAH BT. ABDUL MUTTALIB
- ORAL HEALTH DEVELOPMENT & POLICY DIVISION
- ORAL HEALTH PROMOTION, REGULATION & PRACTISE DIVISION

DEPUTY DIRECTOR-GENERAL (RESEARCH & TECHNICAL SUPPORT) DR.SHAHNAZ BT. MURAD
- PLANNING DIVISION
- ENGINEERING SERVICES DIVISION
- NATIONAL INSTITUTE OF HEALTH SECRETARIAT (NIH)
  - INSTITUTE FOR MEDICAL RESEARCH (IMR)
  - INSTITUTE FOR HEALTH SYSTEMS RESEARCH (IHSR)
  - INSTITUTE FOR PUBLIC HEALTH (IPH)
  - INSTITUTE FOR HEALTH MANAGEMENT (IHM)
  - CLINICAL RESEARCH CENTRES (CRC)
  - INSTITUTE FOR HEALTH BEHAVIOURAL RESEARCH (IHBS)

DEPUTY DIRECTOR-GENERAL (MEDICAL) DATUK DR. JEYAINDRAN A/L TAN SRI SINNADURAI
- MEDICAL DEVELOPMENT DIVISION
- MEDICAL PRACTISE DIVISION
- ALLIED HEALTH SCIENCES DIVISION
- TRADITIONAL & COMPLEMENTARY MEDICINE DIVISION
- TELEHEALTH DIVISION
- NURSING DIVISION

DEPUTY DIRECTOR-GENERAL (PUBLIC HEALTH) DATUK DR.LOKMAN HAKIM B. SULAIMAN
- FAMILY HEALTH DEVELOPMENT DIVISION
- DISEASE CONTROL DIVISION
- HEALTH EDUCATION DIVISION
- NUTRITION DIVISION

DEPUTY SECRETARY-GENERAL (MANAGEMENT) TUAN SAIFUL ANUAR BIN LEBAI HUSSEN
- HUMAN RESOURCE DIVISION
- TRAINING MANAGEMENT DIVISION
- COMPETENCY DEVELOPMENT DIVISION
- INFORMATION MANAGEMENT DIVISION
- MANAGEMENT SERVICES DIVISION

- DEVELOPMENT DIVISION
- POLICY & INTERNATIONAL RELATIONS DIVISION
- LEGAL ADVISOR OFFICE
- INTERNAL AUDIT
- CORPORATE COMMUNICATION UNIT
- INTEGRITY UNIT
- KPI & PEB UNIT
- MALAYSIA HEALTH PROMOTION BOARD
- MEDICAL DEVICE AUTHORITY

(Updated On Jul 04, 2015)

Figure 12: Ministry of Health Malaysia's Organization Chart

WHO COUNTRY COOPERATION STRATEGIC AGENDA (2009–2013 extended to 2015 to facilitate alignment with Malaysia's 11th National Development Plan)	
STRATEGIC PRIORITIES	COUNTRY COOPERATION STRATEGY FOCUS AREAS
STRATEGIC PRIORITY 1: Developing and strengthening the Health System and Health Policy	• Support for review and policy dialog on national health system transformation plan • Strengthening regulatory capacity for medicines and health technologies, including Good Manufacturing Practice inspection, issues related to internet sales, and methods for analytical validation of biologics and other therapeutic products • Strengthening integrated people–centered health services through development of a framework for patient–centered care, strengthening the strategic human resource planning and the capacity for adapting clinical evidence–based practice guidelines to the Malaysian context
STRATEGIC PRIORITY 2: Prevention and Control of NCDs, NCD risk factors and promotion of healthy lifestyles	• Strengthening NCD risk–factor intervention programs, and the monitoring and evaluation of the NCD National Strategic Plan • Strengthen implementation of strategies to prevent harmful use of alcohol among youth • Strengthen capacity in environmental health including the tools and use of health impact assessments
STRATEGIC PRIORITY 3: Communicable Disease Prevention and Control	• Due to Malaysia's own capacity in communicable diseases, it is no longer necessary to provide planned programmatic support in this area, but WHO will provide technical advice, information and standards as needed according to specific emerging and urgent issues
STRATEGIC PRIORITY 4: Malaysia's participation and contribution in regional and international health collaboration	• WHO will continue to ensue Malaysia's engagement at the Regional and Global levels, making the most of opportunities for Malaysia to host technical meetings and share its experience, expertise and information with other countries in the Western Pacific Region and beyond, and to utilize both the expertise available from Malaysia as well as the capacity building opportunities offered by Malaysia to benefit other countries.

Table 8: The World Health Organization's Country Cooperation Strategic Agenda

Health Care System

Malaysia's public sector health care system, which is tax based, has provided equity and access. There is a growing private health sector and a high proportion of health costs that result in out-of-pocket expenditures. Expectations continue to rise with an increasing quest for high-cost medical technology. In order to ensure that all Malaysians continue to receive comprehensive and quality healthcare, there is a need for healthcare reform to address enhancing efficiency and quality. There is also a need for better integration between public and private health sectors as well as stronger emphasis on primary preventive care.[148]

Challenges in the Healthcare System

Malaysia is an upper middle-income country with sustained economic stability, political commitment and financial investment in the social sectors. As a result, their health care system is relatively strong, primary care led and generally accessible with good improvement in health outcomes. However, there are challenges. Despite many achievements, communicable and NCDs persist.

Communicable Diseases

Tuberculosis remains a concern with an incidence rate of annually reported cases of 78.3 per 100,000 and it remains the highest infectious disease-related cause of mortality. Other leading contributors to the communicable disease burden include malaria, HIV/AIDS, food-borne diseases, and hand, foot and mouth diseases. Early in 2014, Malaysia reported its first imported cases

of Avian Influenza A (H7N9) and the Middle East Respiratory Syndrome-Coronavirus (MERS-CoV). As of November, 2015, more than 102,800 cases of dengue fever, including 283 deaths, have been reported in Malaysia.[149] Travelers to Malaysia should protect themselves against mosquito bites to avoid getting dengue.[150]

Non-Communicable Diseases

The prevalence of NCD and NCD risk factors continues to rise. It is estimated that two-thirds of all deaths are due to NCD. Heart disease was the leading cause of death, killing 29,400 people in 2012.[151] In addition, approximately 15% of adult Malaysians have diabetes mellitus, 33% hypertension, 33% hypercholesterolemia, and 29% are overweight and 15% obese. A large proportion of Malaysians with NCD risk factors remain undiagnosed. It is estimated 4.7 million (23.1%) of the adult population currently smoke tobacco (43.9% of men; 1.0% of women), leading to a significant proportion of adults who are exposed to second-hand smoke. Mental illness and disability has also become an increasingly recognized problem especially amongst children and teenagers – 20.0% of children (aged 5-16 years) have mental issues such as developmental disability, emotional and behavioral disorders.[152]

Cooperation for Health

Malaysia has been playing increasingly important roles in regional health development cooperation through knowledge and information sharing. Malaysia is participating and contributing to regional and international health collaborations and activities. It is taking the lead or coordinating

activities such as emerging infectious diseases and food safety, and Malaysia formed an ASEAN Task Force for NCDs to assist with mounting a coordinated regional response to the NCD epidemic within the ASEAN community.

Malaysia is currently the chair of the Third Ministerial Regional Forum on Environment and Health. Malaysia has also been a member of WHO TDR Joint Coordinating Board since 1978. WHO has designated five collaborating centers in Malaysia. These centers have pursued agreed programs of work that benefit the country, regional and global levels. Malaysia also regularly hosts meetings, provides capacity–building opportunities, and shares its experience, expertise and information with other countries in the Western Pacific Region and beyond.[153]

National Program–Population Health

In Malaysia, diet related health problems have dramatically increased over the last few years. Healthy eating, public awareness and knowledge on nutritional information are very important. Consequently, nutritional labelling has emerged as an important aspect of consumer's food purchase decision and it has been incorporated into the Food Regulations. The National Plan of Action for Nutrition of Malaysia (2006–2015) promotes and supports strategies for the practice of healthy eating. The policy integrates efforts from relevant stakeholders in planning. It implements and evaluate food and nutrition programs that are effective and sustainable. Nutrition promotion encompasses promoting infant and young child nutrition, adolescent nutrition, nutrition in institutions and adult nutrition through healthy eating and nutrition for the elderly and those with special needs.

Healthy eating is also propagated through

the establishment of Nutrition Information Centers. Figure 11 (previously mentioned) lists the Population Health Program as one of the main functional programs under the National Health Sector Development Program, which plays important roles in setting and implementing the strategic direction and foci of the health sector during the 10MP.

This program comprises of a Public Health–led population–based health services mainly focusing on health and wellness promotion and disease and illness prevention. Public Health encompasses all aspects of social and economic policies, stressing on preventive measures against diseases, both on the part of the society, family and individual. Programs and activities in Public Health are inclusive of various strategies implemented by Disease Control Division, (which includes Occupational Safety & Health and environmental activities) Family Health Development Division, Food Safety & Quality Division, Health Education Division and Nutrition Division (new).

National Program–Research, Innovation, & Technical Support

Figure 11 (previously mentioned) lists the Research, Innovation, & Technical Support Program as one of the main functional programs under the National Health Sector Development Program, which play important roles in the setting and implementing the strategic direction and foci of the health sector during the 10MP. Malaysia has shortage of skilled health researchers. The main challenge, as also seen in other parts of the world, is the failure to create sufficient critical mass of skilled researchers. It has been a perennial problem to recruit, attract and sustain the best researchers.[154]

Malaysia
Conclusion

Conclusion

Malaysia is vulnerable to natural hazards including floods, forest fires, tsunami, cyclonic storms, landslides, epidemics, and haze.[155] Additionally, the effects of climate change have resulted in an increasing amount of climate related disasters, threatening Malaysia's health and development. Due to its climate and location, Malaysia is among the many economies that are likely to feel the force of climate events sooner, rather than later – in the form of coastal and inland flooding, rise in vector borne diseases, or drops in agricultural yields due to continuous occurrence of droughts.

Malaysia faces numerous potential threats to population health and development due to climate change. Communities living in coastal regions could be at risk of flooding due to sea-level rise. Climate sensitive diseases such as malaria, cholera and dengue as well as heat-stress are likely to rise with increased temperatures and changes in precipitation patterns.[156] These events not only have the potential to destroy lives and communities, but also pose a significant economic risk. There is a need for the government to develop a clear understanding of the cost-benefit trade-offs involved in averting or reducing the impact of such climate-related hazards.[157]

Malaysia management of disasters requires a more proactive approach and should take a more comprehensive multi-hazard focus to consider various types of hazards based on Malaysia's National Progress Report on the Implementation of the HFA (2011-2013 Interim). Existing laws and policies are sectoral in nature and the need for comprehensive legislation and law enforcement to minimize disaster impacts and encourage preventive measures has room for improvement. Capacity to develop and undertake risk assessment in reducing disaster vulnerability for translation into sectoral policies and measures needs to be enhanced.[158]

Disaster management has been a focus of Malaysia's development policy. Malaysia's National Platform for Disaster Risk Reduction was formalized in 2013, which involved various stakeholders from the whole of government, as well as the private sector. There are numerous existing mechanisms on different hazards faced by the country, which are mostly either targeting specific hazard or response-oriented during and/or after the occurrence of disaster. Malaysia has recently set up a new National Disaster Management Agency, which falls under the Prime Minister's department. This agency is taking over the disaster management aspects of the NSC. The NSC still exists, but is handling other areas (i.e. counterterrorism). Malaysia continues to develop its disaster management structure and policies to meet emerging and chronic disaster risks, as well as enhance its evolving role as an HADR leader in the region.

Malaysia
Appendices

Appendices

Department of Defense DMHA Engagements in the Past Five Years (2010-2015)

5-10 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

9-10 April 2015- USPACOM J9 attended the ASEAN Regional Forum workshop on multi-year strategic exercise planning.

22-27 June 2014- USPACOM supported the Multinational Communications Interoperability Program. The aim was to increase interactions between participant nations, NGO's and the international humanitarian community. The CFE-DM developed and integrated HADR scenario events and facilitated civil-military coordination for multi-lateral exercise Pacific Endeavor on communications interoperability.

24 April-3-May 2014- USPACOM, U.S. Army Pacific and the CFE-DM participated in the ASEAN Humanitarian Assistance Exercise (AHEx). AHEx was a Command Post and Field Training Exercise cohosted by the militaries of Thailand and Malaysia. The scenario was a disaster response simulating a typhoon striking Thailand along with situational issues stemming from a typhoon's aftermath.

4-5 June 2013- The CFE-DM supported a Humanitarian Logistics conference in Kuala Lumpur, including presentation of a 90-minute training module.

The Royal Malaysian Navy has been a regular participant of the world's largest biennial exercise, the Rim of the Pacific Exercise (RIMPAC), presided by the U.S. Navy and normally held during June and July in Honolulu, Hawaii. The Royal Malaysian Navy sent personnel in 2010 and 2012, but due to difficulties in sustaining present deployment levels, did not participate in RIMPAC 2014, although observers were present at the exercise.

Royal Malaysian Navy participates in the annual "Cobra Gold" exercises with ASEAN and U.S. partners, though participation is limited to personnel rather than ships. The latest iteration of the exercise was held in February 2015 in Thailand, and included the participation of about 5,000 personnel from the U.S., Thailand, Japan, South Korea, Indonesia and Singapore.

Force Protection/Pre-Deployment Information

Passport/Visa

Malaysia entrance requirements include a valid passport with at least six months' validity remaining beyond the date of arrival. You do not need a visa to enter Malaysia if you are coming for business or tourism for stays of 90 days or less. You also do not need a visa if traveling on an official or diplomatic passport. When you arrive, immigration officials will place an entry stamp in your passport to specify the number of days you can stay.[159]

The eastern Malaysian states of Sabah and Sarawak (on the island of Borneo) have their own immigration authorities and special entry requirements apply. You must have your passport to enter or exit Sabah or Sarawak and will need to pass through state immigration at your port of entry. If you plan to travel to these states, you should contact the Embassy of Malaysia or nearest consulate before your trip for guidance regarding the current entry and exit requirements for Sabah and Sarawak.

Emergency Contact Information

For U.S. Citizens, contact the U.S. Embassy in Kuala Lumpur:

U.S. Embassy Kuala Lumpur
376 Jalan Tun Razak
50400, Kuala Lumpur, Malaysia
Telephone: +(60) (3) 2168-4997/4979
Emergency After-Hours Telephone: +(60) (3) 2168-5000 (press 1 at the recording)
Fax: +(60) (3) 2148-5801
Email: klacs@state.gov

Currency Information

The unit of currency is the Malaysian ringgit indicated as RM or MYR. As of October 2015, 1 U.S. Dollar equaled 4.18459 ringgit.[160]

Travel Health Information

Food and waterborne diseases are the number one cause of illness in travelers. This can be caused by viruses, bacteria, or parasites, which are found throughout the region and can contaminate food and water. Make sure your food and drinking water are safe. Avoid eating food purchased from street vendors, do not drink beverages with ice, and do not eat dairy products unless you know that they have been pasteurized.[161]

Before visiting Malaysia, the U.S. Center for Disease Control and Prevention (CDC) advises ALL travelers to get the following vaccines:[162]

- *Routine vaccines:* Make sure you are up-to-date on routine vaccines before every trip. These vaccines include the measles-mumps-rubella vaccine, diphtheria-tetanus-pertussis vaccine, varicella (chickenpox) vaccine, polio vaccine, and your yearly flu shot.

The CDC advises MOST travelers to get the following vaccines:

- *Hepatitis A:* 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:* 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.

The CDC advises SOME travelers (depending on a longer stay, what you will be doing in Malaysia, and if you are traveling from a country other than the U.S.) to get the following vaccines:

- *Hepatitis B:* 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:* 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:* 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:* can be found in dogs, bats, and other mammals in Malaysia, so the CDC recommends this vaccine for the following groups:
  –Travelers involved in outdoor and other activities (such as camping, hiking, biking, adventure travel, and caving) that put them at risk for animal bites.
  –People who will be working with or around animals (e.g.; veterinarians, wildlife professionals, and researchers).
  –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 GVN 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.

Malaysia Government Ministries, Offices and Committees

Ministry of Agriculture and Agro-Based Industry

Level 9, Wisma Tani, No. 28, Persiaran Perdana,Presint 4, Pusat Pentadbiran Kerajaan Persekutuan,
62624 Putrajaya
T: (3) 8870-1000
F: (3) 8870-1467
E: pro@moa.gov.my
W: www.moa.gov.my

Ministry of Defense

Jalan Padang Tembak,
50634 Kuala Lumpur
T: (3) 2692-1333
F: (3) 2691-4163
E: ukk@mod.gov.my
W: www.mod.gov.my

Ministry of Domestic Trade, Cooperative and Consumerism

Lot 2G3, Presint 2, Pusat Pentadbiran Kerajaan Persekutuan,
62623 Putrajaya
T: 1-800-886-800
F: (3) 8882-5762
E: e-aduan@kpdnhep.gov.my
W: www.kpdnkk.gov.my

Ministry of Education

Kompleks Kerajaan Persekutuan,
Parcel E, Pusat Pentadbiran Kerajaan Persekutuan, 62604 Putrajaya
T: (3) 7723-7070
F: (3) 8888-8431
E: kpkpm@moe.gov.my
W: www.moe.gov.my

Ministry of Energy, Green Technology and Water

Block E4/5, Kompleks Kerajaan Persekutuan, Parcel E, Pusat Pentadbiran Kerajaan Persekutuan,
62668 Putrajaya
T: (3) 8883-6200
F: (3) 8889-3712
W: www.kettha.gov.my

Ministry of Federal Territories and Urban Well-Being

Levels 1 – 4, Block 2, Menara PJH,
Presint 2, Pusat Pentadbiran Kerajaan Persekutuan,
62100 Putrajaya
T: (3) 8889-7888
F: (3) 8888-0375
E: admin@kwp.gov.my
W: www.kwpkb.gov.my

Ministry of Finance

Kompleks Kementerian Kewangan,
Presint 2, Pusat Pentadbiran Kerajaan Persekutuan,
62592 Putrajaya
T: (3) 8882-3000
F: (3) 8882-3893/4
E: pertanyaan@treasury.gov.my
W: www.treasury.gov.my

Ministry of Foreign Affairs

Wisma Putra,
No, 1, Jalan Wisma Putra,
Presint 2, Pusat Pentadbiran Kerajaan Persekutuan,
62602 Putrajaya
T: (3) 8887-4000/4570
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W: www.kln.gov.my

Ministry of Higher Education
No. 2, Menara 2, Jalan P5/6,
Presint 5, Pusat Pentadbiran Kerajaan
Persekutuan,
62200 Putrajaya
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Persekutuan,
62590 Putrajaya
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Ministry of Home Affairs
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62546 Putrajaya
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W: www.moha.gov.my

Ministry of Human Resources
Levels 6 – 9, Block D3,
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62502 Putrajaya
T: (3) 8886-5000
F: (3) 8889-2381
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W: www.mohr.gov.my

Ministries of International Trade and Industry
Blocks 8 & 10, Kompleks Pejabat Kerajaan,
Jalan Duta,
50622 Kuala Lumpur
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Minister of Natural Resources and Environment
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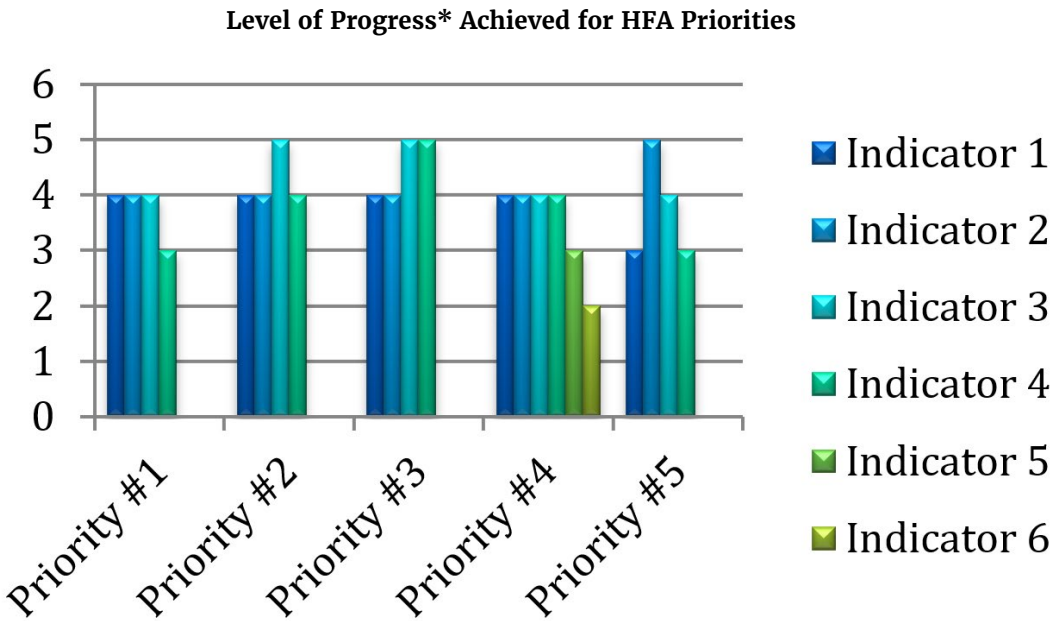E: ppm@pmo.gov.my
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Ministry of Tourism
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Hyogo Framework for Action Country Progress Report

The 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. Below is a summarization of the 2011–2013 results of the Interim HFA for Malaysia.

Strategic Goal Area 1:	Strategic Goal Area 2:	Strategic Goal Area 3:
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.	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.	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.

Level of Progress* Achieved for HFA Priorities

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 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 10th 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 (NSC) 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.

Malaysia National Progress Report on the Implementation of Hyogo Framework for Action (2011-2013)-Interim

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 for Action #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

Priority for Action #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 for Action #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 for Action #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

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[163]

Country Profile

The information in the Country Profile section is sourced directly from the Central Intelligence Agency (CIA) World Fact book.[164]

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

Area:
Total: 329,847 sq. km
Land: 328,657 sq. km
Water: 1,190 sq. km
Country comparison to the world: 67

Area – comparative: slightly larger than New Mexico

Land boundaries: total: 2,742 km

Border countries (3): Brunei 266 km, Indonesia 1,881 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 extremes:
Lowest point: Indian Ocean 0 m
Highest point: Gunung Kinabalu 4,100 m

Natural resources: tin, petroleum, timber, copper, iron ore, natural gas, bauxite

Land use:
Agricultural land: 23.2%
Arable land 2.9%; permanent crops 19.4%; permanent pasture 0.9%
Forest: 62%
Other: 14.8% (2011 est.)
Irrigated land: 3,800 sq. km (2009)
Total renewable water resources: 580 cu km (2011)
Freshwater withdrawal (domestic/industrial/agricultural): total: 11.2 cu km/yr. (35%/43%/22%)
per capita: 414 cu m/yr. (2005)

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

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 Geography – note: Strategic location along Strait of Malacca and southern South China Sea

Ethnic groups: Malay 50.1%, Chinese 22.6%, indigenous 11.8%, Indian 6.7%, other 0.7%, non-citizens 8.2% (2010 est.)

Languages: Bahasa Malaysia (official), English, Chinese (Cantonese, Mandarin, Hokkien, Hakka, Hainan, Foochow), Tamil, Telugu, Malayalam, Panjabi, Thai
Note: In East Malaysia there are several indigenous languages; most widely spoken are Iban and Kadazan

Religions: Islam (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.)

Population:
30,513,848 (July 2015 est.)
Country comparison to the world: 43

Age structure:
0–14 years: 28.49% (male 4,472,457/female 4,221,384)
15–24 years: 16.91% (male 2,615,356/female 2,543,039)
25–54 years: 41.12% (male 6,352,742/female 6,194,303)
55–64 years: 7.84% (male 1,215,315/female 1,175,868)
65 years and over: 5.65% (male 817,766/female 905,618) (2015 est.)

Dependency ratios:
Total dependency ratio: 43.6%
Youth dependency ratio: 35.2%
Elderly dependency ratio: 8.4%
Potential support ratio: 11.9% (2015 est.)
Median age:
Total: 27.9 years
Male: 27.7 years
Female: 28.2 years (2015 est.)

Population growth rate:
1.44% (2015 est.)
Country comparison to the world: 83

Birth rate:
19.71 births/1,000 population (2015 est.)
Country comparison to the world: 86

Death rate:
5.03 deaths/1,000 population (2015 est.)
Country comparison to the world: 188

Net migration rate:
−0.33 migrant(s)/1,000 population
Note: does not reflect net flow of an unknown number of illegal immigrants from other countries in the region (2015 est.)
Country comparison to the world: 130

Urbanization:
Urban population: 74.7% of total population (2015)
Rate of urbanization: 2.66% annual rate of change (2010–15 est.)
Major urban areas – population:
KUALA LUMPUR (capital) 6.837 million; Johor Bahru 912,000 (2015)

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: 1.03 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 (2015)

Maternal mortality rate:
40 deaths/100,000 live births (2015 est.)
Country comparison to the world: 125

Infant mortality rate:
Total: 13.27 deaths/1,000 live births
Male: 15.33 deaths/1,000 live births
Female: 11.07 deaths/1,000 live births (2015 est.)
Country comparison to the world: 113

Life expectancy at birth:
Total population: 74.75 years
Male: 71.97 years
Female: 77.73 years (2015 est.)
Country comparison to the world: 112

Total fertility rate:
2.55 children born/woman (2015 est.)
Country comparison to the world: 76

Health expenditures:4% of GDP (2013)
Country comparison to the world: 161

Physician's density: 1.2 physicians/1,000 population (2010)

Hospital bed density:1.9 beds/1,000 population (2012)
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
Rural: 95.9% of population
Total: 96% of population
Unimproved:
Urban: 3.9% of population
Rural: 4.1% of population
Total: 4% of population (2015 est.)

HIV/AIDS – adult prevalence rate:
0.45% (2014 est.)
Country comparison to the world: 72

HIV/AIDS – people living with HIV/AIDS:
100,800 (2014 est.)
Country comparison to the world: 44

HIV/AIDS – deaths:
9,000 (2014 est.)
Country comparison to the world: 27

Major infectious diseases:
Degree of risk: intermediate
Food or waterborne diseases: bacterial diarrhea
Vector-borne diseases: dengue fever
Water contact disease: leptospirosis
Note: Highly pathogenic H5N1 avian influenza has been identified in this country; it poses a negligible risk with extremely rare cases possible among U.S. citizens who have close contact with birds (2013)

Obesity – adult prevalence rate:
12.9% (2014)
Country comparison to the world: 123
Children under the age of 5 years underweight:12.9% (2006)
Country comparison to the world: 58
Education expenditures: 5.9% of GDP (2011)
Country comparison to the world: 46

Literacy:
Definition: age 15 and over can read and write
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: 13 years (2005)

Unemployment, youth ages 15–24:
Total: 10.3%
Male: 9.8%
Female: 11% (2012 est.)
Country comparison to the world: 100

Government type: Constitutional monarchy
Note: Nominally headed by paramount ruler (commonly referred to as the king) and a bicameral parliament consisting of a nonelected upper house and an elected lower house; 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 federal constitution; under terms of federation, Sabah and Sarawak retain certain constitutional prerogatives (e.g., right to maintain their own immigration controls).

Capital: Kuala Lumpur
Note – Putrajaya is referred to as an administrative center 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 31 August (1957) (independence of Malaya); Malaysia Day 16 September (1963) (formation of Malaysia)

Constitution: Previous 1948; latest drafted 21 February 1957, effective 27 August 1957; amended many times, last in 2010 (2015)

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:
Dual citizenship recognized: no

Suffrage: 21 years of age; universal

Executive branch:
Chief of state: King Tuanku ABDUL HALIM Mu'adzam Shah (selected on 13 December 2011; installed on 11 April 2012); 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 Mohamed NAJIB bin Abdul Najib Razak (since 3 April 2009); Deputy Prime Minister MUHYIDDIN bin Mohamed Yassin (since 9 April 2009)
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 14 October 2011 (next to be held in 2016); 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.
Election results: Tuanku ABDUL HALIM Mu'adzam Shah elected king; Mohamed NAJIB bin Abdul Najib Razak (UMNO) sworn in as prime minister for second term on 3 April 2009

Legislative branch:
Description: bicameral parliament consists of the 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) and the 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: House of Representatives – last held on 5 May 2013 (next to be held by May 2018)
Election results: House of Representatives – percent of vote by party/coalition – BN 47.4%, PR 50.9%, other 1.7%; seats by party/coalition – BN 133, PR 89

Judicial branch:
Highest court(s): 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 and 7 judges);
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 65
Subordinate courts: Court of Appeal; High Court; Sessions Court; Magistrates' Court

Political parties and leaders:
National Front (Barisan Nasional) or BN
Gerakan Rakyat Malaysia Party or GERAKAN [MAH Siew Keong]
Liberal Democratic Party (Parti Liberal Demokratik – Sabah) or LDP [TEO Chee Kang]
Malaysian Chinese Association (Persatuan China Malaysia) or MCA [LIOW Tiong Lai]
Malaysian Indian Congress (Kongres India Malaysia) or MIC [S. SUBRAMANIAM]
Parti Bersatu Rakyat Sabah or PBRS [Joseph KURUP]
Parti Bersatu Sabah or PBS [Joseph PAIRIN Kitingan]
Parti Pesaka Bumiputera Bersatu or PBB

[Adenan SATEM]
Parti Rakyat Sarawak or PRS [James MASING]
Sarawak Progressive Democratic Party or SPDP [TIONG King Sing]
Sarawak United People's Party (Parti Bersatu Rakyat Sarawak) or SUPP [Dr. SIM Kui Hian]
United Malays National Organization or UMNO [NAJIB bin Abdul Razak]
United Pasokmomogun Kadazandusun Murut Organization (Pertubuhan Pasko Momogun Kadazan Dusun Bersatu) or UPKO [Wilfred Madius TANGAU]
People's Progressive Party (Parti Progresif Penduduk Malaysia) or PPP [M. Kayveas]
People's Alliance (Pakatan Rakyat) or PR: Democratic Action Party (Parti Tindakan Demokratik) or DAP [TAN Kok Wai, Acting National Chairman]
Islamic Party of Malaysia (Parti Islam se Malaysia) or PAS [Abdul HADI Awang
People's Justice Party (Parti Keadilan Rakyat) or PKR [WAN AZIZAH Wan Ismail]

Political pressure groups and leaders:
Bar Council
BERSIH (electoral reform coalition)
ISMA (Muslim NGO)
PERKASA (defense of Malay rights)
Other: religious groups; women's groups; youth groups

Diplomatic representation in the U.S.:
Chief of mission: Ambassador AWANG ADEK Bin Hussin (since 21 May 2015)
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 U.S:
Chief of mission: Ambassador Joseph Y. YUN (since 2 October 2013)
Embassy: 376 Jalan Tun Razak, 50400 Kuala Lumpur
Mailing address: U.S. 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 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 U.S.

National symbol(s): Tiger, hibiscus; national colors: red, white, blue, yellow

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

Economics:
GDP (purchasing power parity):
$769.4 billion (2014 est.)
$725.9 billion (2013 est.)
$693.3 billion (2012 est.)
Note: data are in 2014 U.S. dollars
Country comparison to the world: 29

GDP (official exchange rate):
$338.1 billion (2014 est.)
GDP – real growth rate:
6% (2014 est.)
4.7% (2013 est.)
5.5% (2012 est.)
Country comparison to the world: 39

GDP – per capita (PPP):
$25,100 (2014 est.)
$23,700 (2013 est.)
$22,700 (2012 est.)
Note: data are in 2014 U.S. dollars
Country comparison to the world: 73
Gross national saving:
29.3% of GDP (2014 est.)
29.4% of GDP (2013 est.)
30.9% of GDP (2012 est.)
Country comparison to the world: 27

GDP – composition, by end use:
Household consumption: 52.4%
Government consumption: 13.3%
Investment in fixed capital: 26%
Investment in inventories: –1%
Exports of goods and services: 73.8%
Imports of goods and services: –64.6%
(2014 est.)

GDP – composition, by sector of origin:
Agriculture: 9.1%
Industry: 34.8%
Services: 56.1% (2014 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: 6% (2014 est.)
Country comparison to the world: 35
Labor force:14 million (2014 est.)
Country comparison to the world: 42

Labor force – by occupation:
Agriculture: 11%
Industry: 36%
Services: 53% (2012 est.)

Unemployment rate:
2.9% (2014 est.)
3.1% (2013 est.)
Country comparison to the world: 20

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: 33

Budget:
Revenues: $67.4 billion
Expenditures: $78.83 billion (2014 est.)

Taxes and other revenues:
19.9% of GDP (2014 est.)
Country comparison to the world: 165

Budget surplus (+) or deficit (−):
−3.4% of GDP (2014 est.)
Country comparison to the world: 138

Public debt:
52.7% of GDP (2014 est.)
53% of GDP (2013 est.)
Note: this figure is based on the amount of federal government debt, RM501.6 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: 66

Fiscal year: Calendar year

Inflation rate (consumer prices):
3.1% (2014 est.)
2.1% (2013 est.)
Note: approximately 30% of goods are price-controlled
Country comparison to the world: 132

Central bank discount rate:
3% (31 December 2011)
2.83% (31 December 2010)
Country comparison to the world: 107

Commercial bank prime lending rate:
4.67% (31 December 2014 est.)
4.56% (31 December 2013 est.)
Country comparison to the world: 153

Stock of narrow money:
$99.12 billion (31 December 2014 est.)
$99.8 billion (31 December 2013 est.)
Country comparison to the world: 39

Stock of broad money:
$478.7 billion (31 December 2014 est.)
$440.3 billion (31 December 2013 est.)
Country comparison to the world: 23

Stock of domestic credit:
$444.8 billion (31 December 2014 est.)
$428.8 billion (31 December 2013 est.)
Country comparison to the world: 28

Market value of publicly traded shares:
$476.3 billion (31 December 2012 est.)
$395.1 billion (31 December 2011)
$410.5 billion (31 December 2010 est.)
Country comparison to the world: 24

Current account balance:
$14.46 billion (2014 est.)
$11.26 billion (2013 est.)
Country comparison to the world: 20
Exports:
$224.9 billion (2014 est.)
$219.2 billion (2013 est.)
Country comparison to the world: 24

Exports – commodities: Semiconductors and electronic equipment, palm oil, petroleum and liquefied natural gas, wood and wood products, palm oil, rubber, textiles, chemicals, solar panels.

Exports – partners: Singapore 14.2%, China 12%, Japan 10.8%, U.S. 8.4%, Thailand 5.3%, Hong Kong 4.8%, Australia 4.3%, India 4.2%, Indonesia 4.2% (2014).

Imports:
$189.8 billion (2014 est.)
$186.7 billion (2013 est.)
Country comparison to the world: 27

Imports – commodities:
Electronics, machinery, petroleum products, plastics, vehicles, iron and steel products, chemicals

Imports – partners:
China 16.9%, Singapore 12.6%, Japan 8%, U.S. 7.7%, Thailand 5.8%, South Korea 4.6%, Indonesia 4.1% (2014)
Reserves of foreign exchange and gold:
$115.9 billion (31 December 2014 est.)
$134.9 billion (31 December 2013 est.)
Country comparison to the world: 21

Debt – external:
$207.3 billion (31 December 2014 est.)
$213.1 billion (31 December 2013 est.)
Country comparison to the world: 18

Stock of direct foreign investment – at home:
$155.8 billion (31 December 2014 est.)
$144.7 billion (31 December 2013 est.)
Country comparison to the world: 32

Stock of direct foreign investment – abroad:
$149.5 billion (31 December 2014 est.)
$134 billion (31 December 2013 est.)
Country comparison to the world: 27
Exchange rates: ringgits (MYR) or (RM) per U.S. dollar – 3.2729 (2014 est.)

Energy:
Electricity – production:
126.8 billion kWh (2012 est.)
Country comparison to the world: 30

Electricity – consumption:
118.5 billion kWh (2012 est.)
Country comparison to the world: 29
Electricity – exports:
12 million kWh (2012 est.)
Country comparison to the world: 89

Electricity – imports:
372 million kWh (2013 est.)
Country comparison to the world: 81

Electricity – installed generating capacity:
28.53 million kW (2012 est.)
Country comparison to the world: 30

Electricity – from fossil fuels:
87.6% of total installed capacity (2012 est.)
Country comparison to the world: 81

Electricity – from nuclear fuels:
0% of total installed capacity (2012 est.)
Country comparison to the world: 148

Electricity – from hydroelectric plants:
11.6% of total installed capacity (2012 est.)
Country comparison to the world: 112

Electricity – from other renewable sources:
0.8% of total installed capacity (2012 est.)
Country comparison to the world: 96

Crude oil – production:
597,500 bbl/day (2014 est.)
Country comparison to the world: 26

Crude oil – exports:
244,600 bbl/day (2012 est.)
Country comparison to the world: 28

Crude oil – imports:
200,200 bbl/day (2012 est.)
Country comparison to the world: 32

Crude oil – proved reserves:
4 billion bbl (1 January 2015 est.)
Country comparison to the world: 27

Refined petroleum products – production:
560,700 bbl/day (2012 est.)
Country comparison to the world: 30

Refined petroleum products – consumption:
680,000 bbl/day (2013 est.)
Country comparison to the world: 30

Refined petroleum products – exports:
235,600 bbl/day (2012 est.)
Country comparison to the world: 29

Refined petroleum products – imports:
302,700 bbl/day (2012 est.)
Country comparison to the world: 23

Natural gas – production:
64 billion cu m (2013 est.)
Country comparison to the world: 14

Natural gas – consumption:
31.86 billion cu m (2013 est.)
Country comparison to the world: 30

Natural gas – exports:
35.4 billion cu m (2013 est.)
Country comparison to the world: 10

Natural gas – imports:
2.34 billion cu m (2012 est.)
Country comparison to the world: 46

Natural gas – proved reserves:
2.35 trillion cu m (1 January 2014 est.)
Country comparison to the world: 16

Carbon dioxide emissions from consumption of energy:
198.8 million Mt (2012 est.)
Country comparison to the world: 31

Communications:
Telephones – fixed lines:
Total subscriptions: 4.41 million
Subscriptions per 100 inhabitants: 15 (2014)
Country comparison to the world: 37

Telephones – mobile cellular:
Total: 44.9 million
Subscriptions per 100 inhabitants: 149 (2014)
Country comparison to the world: 31

Telephone system:
General assessment: modern system featuring good intercity service on Peninsular Malaysia provided mainly by microwave radio relay and an adequate intercity microwave radio relay network between Sabah and Sarawak via Brunei; international service excellent

Domestic: domestic satellite system with 2 earth stations; combined fixed-line and mobile-cellular teledensity roughly 140 per 100 persons

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) (2011)

Broadcast media: State-owned TV broadcaster operates two TV networks with relays throughout the country, and the leading private commercial media group operates four 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).

Radio broadcast stations:
AM 35, FM 391, shortwave 15 (2001)
Television broadcast stations:
88 (mainland Malaysia 51, Sabah 16, and Sarawak 21) (2006)

Internet country code: .my

Internet users:
Total: 12.1 million
Percent of population: 40.3% (2014 est.)
Country comparison to the world: 40

Transportation:
Airports:
114 (2013)
Country comparison to the world: 51

Airports – with paved runways:
Total: 39
Over 3,047 m: 8
2,438 to 3,047 m: 8
1,524 to 2,437 m: 7
914 to 1,523 m: 8
Under 914 m: 8 (2013)

Airports – with unpaved runways:
Total: 75
914 to 1,523 m: 6
Under 914 m:
69 (2013)

Heliports: 4 (2013)

Pipelines: Condensate 354 km; gas 6,439 km; liquid petroleum gas 155 km; oil 1,937 km; oil/gas/water 43 km; refined products 114 km; water 26 km (2013)

Railways:
Total: 1,849 km
Standard gauge: 59 km 1.435-m gauge (59 km electrified)
Narrow gauge: 1,792 km 1.000-m gauge (339 km electrified) (2014)
Country comparison to the world: 75
Roadways:
Total: 144,403 km (excludes local roads)
Paved: 116,169 km (includes 1,821 km of expressways)
Unpaved: 28,234 km (2010)
Country comparison to the world: 33

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: 315
By type: bulk carrier 11, cargo 83, carrier 2, chemical tanker 47, container 41, liquefied gas 34, passenger/cargo 4, petroleum tanker 86, roll on/roll off 2, vehicle carrier 5
Foreign-owned: 26 (Denmark 1, Hong Kong 8, Japan 2, Russia 2, Singapore 13)
Registered in other countries: 82 (Bahamas 13, India 1, Indonesia 1, Isle of Man 6, Malta 1, Marshall Islands 11, Panama 12, Papua New Guinea 1, Philippines 1, Saint Kitts and Nevis 1, Singapore 27, Thailand 3, U.S. 2, unknown 2) (2010)
Country comparison to the world: 31

Ports and terminals:
Major seaport(s): Bintulu, Johor Bahru, George Town (Penang), Port Kelang (Port Klang), Tanjung Pelepas
Container Port (TEUs): George Town (Penang) (1,202,180), Port Kelang (Port Klang) (9,435,403), Tanjung Pelepas (7,302,461)
LNG terminal(s) (export): Bintulu (Sarawak)
LNG terminal(s) (import): Sungei Udang
Transportation – note: 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; 24 attacks were reported in 2014

Military:
Military branches: MAF (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)

Manpower available for military service:
Males age 16-49: 7,501,518
Females age 16-49: 7,315,999 (2010 est.)

Manpower fit for military service:
Males age 16-49: 6,247,306
Females age 16-49: 6,175,274 (2010 est.)

Manpower reaching militarily significant age annually:
Male: 265,008
Female: 254,812 (2010 est.)

Military expenditures:
1.5% of GDP (2014)
Country comparison to the world: 58

Acronyms and Abbreviations

Acronym	Definition
ACE course	AHA Center Executive course
ADB	Asian Development Bank
AHA Center	ASEAN Humanitarian Assistance (AHA) Center
AHEx	ASEAN Humanitarian Assistance Exercise
AMRFF	Atmospheric and Radar Satellite Model–Based Rainfall and Flood Forecasting
APEC	Asia–Pacific Economic Cooperation
API	Air Pollutant Index
ARF	ASEAN Regional Forum
ARF DiREX	ASEAN Regional Forum Disaster Relief Exercise
ASEAN	Association of Southeast Asian Nations
BEEP	Bumiputra Economic Empowerment Program
BIS	Bank of International Settlements
CDC	U.S. Center for Disease Control and Prevention
CFE–DM	Center for Excellence in Disaster Management and Humanitarian Assistance
CHIP	Center for Excellence in Disaster Management and Humanitarian Assistance (CFE–DM) Humanitarian Information Paper
CIA	Central Intelligence Agency
CICA	Confederation of International Contractors Association
DAO	Defense Attaché Office
DELSA	Disaster Emergency Logistics System for ASEAN
DID	Department of Drainage and Irrigation
DoD	Department of Defense
DoS	Department of State
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DSCA	Defense Security Cooperation Agency
ERAT	ASEAN Emergency Response Assessment Team
ETP	Economic Transformation Program
FAO	United Nations Food and Agriculture Organization
FCTC	WHO Framework Convention on Tobacco Control
GBC	General Border Committee

Acronym	Definition
GDP	Gross Domestic Product
GIRN	Government Integrated Radio Network
GMT	Greenwich Mean Time
HADR	Humanitarian Assistance and Disaster Relief
HDR	Humanitarian Daily Rations
HFA	Hyogo Framework for Action
IAEA	International Atomic Energy Agency
IATA	International Air Transport Association
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Organization
ICRC	International Committee of the Red Cross
ICRM	International Committee for Radionuclide Metrology
ICT	Information and Communication Technology
IDA	International Development Association
IDSR	Integrated Disease Surveillance and Response system
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFRC	International Federation of the Red Cross and Red Crescent Societies
IHR	International Health Regulations
ILO	International Labor Organization
IMF	International Monetary Fund
IMO	International Maritime Organization
IMSO	International Mobile Satellite Organization
IOM	International Organization for Migration
IWRM	Integrated Water Resources Management and Integrated Coastal Zone Management (ICZM)
KLIA	Kuala Lumpur International Airport
KWABBN	Fund Kumpulan Wang Amanah Bantuan Bencana Negara
MDG	Millennium Development Goal
MERS	Malaysia Emergency Response System
MERS–CoV	Middle East Respiratory Syndrome–Coronavirus

Acronym	Definition
MOH	Ministry of Health
MoU	Memorandum of Understanding
MP	Malaysian Plan
MYR	Malaysian ringgit (also denoted as RM)
NAM	Non-Aligned Movement
NCD	Non-Communicable Diseases
NGO	nongovernmental organization
NSC	National Security Council
NSP	National Strategic Plan
ODC	U.S. Office of Defense Cooperation
OFDA	Office of Foreign Disaster Assistance
OHDACA	Overseas Humanitarian, Disaster, and Civic Aid
OPCW	Organization for the Prohibition of Chemical Weapons
RIMPAC	The Rim of the Pacific Exercise
RM	Malaysian ringgit (also denoted as MYR)
U.S.	United States
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	The United Nations High Commission for Refugees
UNHRD	United Nations Humanitarian Response Depot
UNICEF	United Nations Children's Fund Vietnam
UNIDO	United Nations Industrial Development Organization
UN-REDD	United Nations Reducing Emissions from Deforestation and Degradation
USAID	United States Agency for International Development
WCO	World Customs Organization
WFTU	World Federation of Trade Unions
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization
WTO	World Trade Organization

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