

MALAYSIA



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1. NATIONAL PROFILE

1.1 General¹

Malaysia was created in 1963 through the merger of Malaya (independent in 1957) and the former British Singapore, both of which formed West Malaysia, and Sabah and Sarawak in North Borneo which comprise East Malaysia. Singapore separated from the union in 1965.

Malaya, what is now Peninsular Malaysia, formed on 31 August 1957; Malaysia (Malaya, Sabah, Sarawak and Singapore) formed 9 July 1963 (Singapore left Malaysia on 9 August 1965); nominally headed by the Prime Minister and a bicameral Parliament consisting of a nonelected upper house and an elected lower house; Peninsular Malaysian states have hereditary royalty rulers in all but Negeri Sembilan, Melaka, Penang, Sabah and Sarawak, where Governors are appointed by the Malaysian Government; powers of state governments are limited by the federal constitution; under terms of the federation, Sabah and Sarawak retain certain constitution; (eg: the right to maintain their own immigration controls); Sabah - holds 20 seats in the House of Representatives, with foreign affairs, defense, internal security, and other powers delegated to federal government; Sarawak - holds 28 seats in the House of Representatives, with foreign affairs, defense, internal security and other powers delegated to federal government.

1.2 Physiography²

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

Geographic Coordinates	2 30 N, 112 30 E
Map References	Southeast Asia
Area	Total: 329, 750 sq km; Land: 328, 550 sq km; water: 1,200 sq km
Land boundaries	Total : 2,669km
Border countries	Brunei 381 km, Indonesia 1,782 km, Thailand 506 km.
Coastline	4, 675 km (Peninsular Malaysia 2,068km, East Malaysia 2,607km)

Maritime claims	Continental shelf : 200-m depth or to the depth of exploitation; specified boundary in the South China Sea Exclusive Economic Zone : 200 NM Territorial Sea : 12 NM
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1.3 Climate

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

1.4 Socio-economic Profile^{3,4}

Socio-economic Indicators		
GDP: Gross domestic product (million current US\$)	2011	287934
GDP per capita (current US\$)	2011	9977.0
GNI: Gross national income per capita (current US\$)	2011	9728.0
Population (millions)	2014	29.72
Urban (% of population)	2014	74.16
Sex ratio (males per 100 females)	2012	102.8
Life expectancy at birth (females/males, years)	2010-2015	76.9/72.5
Adult literacy rate (% ages 15 and older)	2014	93.1
Expenditure on education (% of GDP)	2014	5.13

1.5 Administrative Setup⁵

13 states and 3 Federal Territories; Negeri Sembilan, Perlis, Kedah, Pulau Pinang, Perak, Selangor, Melaka, Pahang, Johor, Kelantan, Terengganu, Sabah, Sarawak and the Federal Territories of Kuala Lumpur, Putrajaya and Labuan.

2. DISASTER RISK PROFILE⁶

2.1 Risk Exposure Profile

While Malaysia is generally spared severe natural disasters such as earthquake, volcanic eruption and typhoon, it faces floods, landslides and severe haze. In the

past years, it has experienced several extreme weather and climatic events, ranging from thunderstorms to monsoonal floods. The 2010 flood in Kedah and Perlis was among the worst in its history. The total economic loss and the financial burden on the government were heavy.

2.2 Geography and Climate

Malaysia is located just outside the “Pacific Rim of Fire” stretching over two parts: Peninsular Malaysia to the west and East Malaysia to the east. Malaysia's climate is hot and humid throughout the year. The climate on the peninsula is affected by wind from the mainland, while East Malaysia has more maritime weather. Malaysia is exposed to the El Nino effect and two monsoon winds seasons: the Southwest Monsoon (late May – September), and the Northeast Monsoon (November to March) which brings in more rainfall. Local climates are affected by the presence of mountain ranges from highlands, lowlands, and coastal regions. Climate change is likely to have a significant effect on Malaysia, increasing sea levels and rainfall, increasing flooding risks and leading to large droughts.

2.3 Disaster Risk

Malaysia faces disaster risks from floods and landslides. Below is an overview of

Major Disasters in Malaysia for the period 1982 to 2011 by total number of people affected

Disaster	Date	Affected
Storm	1/8/1995	1,000,000
Drought	December 1988	730,000
Flood	August 2001	453,000
Flood	September 2000	450,000
Flood	15/08/1996	420,000
Flood	September 1995	391,400
Flood	September 1991	332,000

Major Disasters in Malaysia for the period 1982 to 2011 by damages (000 USD)

Disaster	Date	Damage
Storm	July 1993	302,151
Storm	1/10/2009	100,000
Flood	August 1992	21,828
Storm	10/7/1992	3,650
Drought	July 1991	1,000
Flood	September 2000	1,000
Storm	1991	150

the most significant disaster events in terms of total number of affected and damages caused.

2.4 Disaster Hazards

Flood is the most significant natural hazard in Malaysia. Other than flooding, the country also experienced some man-made disasters – landslides mostly- causing considerable damage to properties and loss of lives. Monsoonal floods are an annual occurrence varying in terms of severity, place and time of occurrences. Bordering with countries that sits on active tectonic plates like Indonesia and the Philippines, increases the chances for Malaysia to be inflicted with earthquake related disasters.

2.5 Disaster Exposure

Yearly, an estimated 29,800 sq kilometers are flooded, affecting 4.82 million people and causing physical damages amounting up to RM915 million.

2.6 Disaster Vulnerability

Rapid development, unplanned urbanization, climate change and environmental degradation have caused worse and more frequent occurrence of flash floods especially in urban areas.

Vulnerability Index

	Vulnerability Index	Risk Absolute	Risk Relative	Mortality Risk Index
Multiple				
Cyclone				
Flood				
Landslide				
Earthquake				

Legend

Very low Very high

0 1 2 3 4 5 6 7 8 9 10

Vulnerability Index: Estimated number of people killed per year (per mio. exposed)

Risk Absolute: Average killed per year

Risk Relative: Killed per million per year

Mortality Risk Index: Average of both

3. INSTITUTIONAL SETUP⁷

3.1 Legal System

The National Security Council (NSC) Directive No. 20 promulgated in 1997 states the mechanism on the management of disasters including the responsibilities and functions of the various agencies under an integrated emergency management system.

The Land Conservation Act, Environmental Quality Act (1974), and the Local Government Act (1976) and the Road, Drainage and Building Act also refer to disaster management.

3.2 Organization



The National Security Division (NSD) in the Prime Minister's Department is responsible for coordination of all activities related to disaster. Disaster Management and Relief Committee (DMRC) carries out the responsibilities of the NSC in coordinating all the activities related to disaster management. DMRC are established at three different levels, i.e. at the Federal, State and District levels, whereby the NSD is the Secretariat. At the federal level, DMRC is responsible in the formulation of national policies and strategies regarding the alertness and the preparation of various agencies involved in the handling of disasters.

4. INITIATIVES⁸

4.1 National Security Council (directive no. 20)

(The Policy and Mechanism on National Disaster and Relief Management)

Following the tragedy of the collapse of Highland Towers Condominium, the Malaysian Cabinet made a decision to form a mechanism under the National Security Division, Prime Minister Dept for the management of on scene incident in major disaster on land.

National Security Council (NSC) is the principal policy making and coordinating body for disaster management. The NSC coordinates and plans all activities related to preparedness, prevention, response/relief operations and recovery/rehabilitation of disaster management.

The National Security Council Directive No. 20 (NSC No. 20): The Policy and Mechanism for National Disaster and Relief Management is the main guideline for disaster management in Malaysia. The directive prescribes the mechanism on the management of disasters including the responsibilities and functions of related agencies under an integrated emergency management system. This is achieved through the establishment of the Disaster Management and Relief Committee at three different levels (federal, state and district levels) pending the severity of the disaster. At the Federal level, this committee is chaired by the Minister appointed by the Prime Minister. The directive is supported by other Standard Operating Procedures which outline the mechanism as well as roles and responsibility of

various agencies for specific disasters, i.e. flood; open burning, forest fire, haze, industrial disasters etc.

The Land Conservation Act; Environmental Protection Act; Town and Country Planning Act; Irrigation and Drainage Act; and Uniform Building by Law complement one another to form a comprehensive disaster mitigation framework.

4.2 Prevention and Mitigation

Flood is the most significant natural hazard in Malaysia. Yearly, an estimated 29,800 sq kilometers are flooded, affecting 4.82 million people and causing physical damages amounting up to RM915 million. Rapid development, unplanned urbanization, climate change and environmental degradation have caused worse and more frequent occurrence of flash floods especially in urban areas. Since 1972, the Government spent billions under the “Five Year Malaysian Plan” for Flood Mitigation Projects to reduce such risks. From 2001 to 2005 (5 years) a total of RM1.790 billion was spent for structural flood mitigation measures. Under the Ninth Malaysia Plan (2006-2010) the allocation for structural flood control works has tremendously increased to RM5.81 billion.

Apart from conventional Flood Mitigation Projects, the Storm water Management and Road Tunnel (SMART) was constructed as an innovative solution to alleviate the problem of flash flood in the Kuala Lumpur city centre. The 9.7 km tunnel integrates both storm water management and motorway with the same infrastructure. The SMART system diverts large volumes of flood water from entering this critical stretch of traffic at the city centre via a holding pond, bypass tunnel and storage preventing spillover during heavy downpours.

4.3 Preparedness

The Department of Irrigation and Drainage and Federal Department of Town and Country Planning produced several guidelines for development projects namely the Urban Storm water Management Manual (MSMA) in 2000 and Land Use Planning Appraisal for Risk Areas (LUPAR) in 2005. These guidelines are implemented by

local authorities in the feasibility assessment and execution of physical developments.

The Public Works Department has completed a study to develop the National Slope Master Plan with the aim of providing a comprehensive documentation for slope management and disaster risk reduction strategy for landslides. At the First World Landslide Forum in Japan in November 2008, the Department was chosen as one of ten World Centres of Excellence in Disaster Risk Reduction by the United Nations International Strategy for Disaster Reduction (UNISDR)

4.4 Early Warning Systems and Information and Communication Technology (ICT)

Flood forecasting and early warning system are put in place to disseminate early warning to the public. This integrated system comprised of hundreds of rainfall and water level stations, manual sticks gauges, boards and sirens installed at strategic locations all over the country.

A National Tsunami Early Warning System has been developed by the Meteorological Department after 26 December 2004 to provide early warning on tsunami threat that may affect the country. With this system, the Government is able to forewarn the public of the possible occurrence of tsunami over the Indian Ocean, South China Sea or the Pacific Ocean.

Early warnings are disseminated through sirens, short messaging system (SMS), telephone, telefax, webpage, mass media broadcasting system and public announcements. The dissemination of information in a timely manner is crucial to ensure that the vulnerable communities and responders are promptly informed to enable them to take necessary actions.

The ICT is also utilized to promote awareness and disseminate early warnings to the public via a Fixed-Line Disaster Alert System (FLAS). A separate system known as the Government Integrated Radio Network (GIRN) provides radio communication between responders during emergency or disaster. Disaster reporting is now more efficient with the centralized Malaysia Emergency Response System (MERS) emergency hotline: “999”.

The mass media is an effective platform to disaster preparedness among the public. To fully realize this potential, the Ministry of Information, Communication and Culture has established a Disaster unit in the Department of Broadcasting Malaysia. This is coordinated at the regional level by the Asia-Pacific Broadcasting Union (ABU).

4.5 Financial Aid

The Government has also established the National Disaster Relief Fund to provide financial assistance to disaster victims. The types of financial assistance provided are for eventualities, such as, loss of income, damaged/ demolished house; agricultural damage; livestock and aquaculture damage; and burial cost for fatalities due to disasters.

Building on the experience of the widespread monsoon flood in 2006, the Government through the Central Bank of Malaysia has allocated RM500 million worth of special relief guarantee facility (SRGF) to be administered by all commercial banks, Bank Perusahaan Kecil & Sederhana Malaysia.

Berhad, Bank Kerjasama Rakyat Malaysia Berhad and Agro Bank (formerly known as Bank Pertanian Malaysia) aimed at recovering businesses and rebuilding damaged infrastructure in areas affected by disasters. The response to the facility was very encouraging with 4,641 applications approved, amounting to approximately RM472 million. This facility is an example of public-private-partnership in which the commercial banks provide the financing with 2.5% interest to the borrower whilst the Central Bank covers an additional 2.45% of interest and 80% guarantee of the financing obtained.

The establishment of a cooperative in the form of Amanah Ikhtiar Malaysia (The Endeavor Trust of Malaysia) in 1987 has improved the resilience of communities previously vulnerable to disasters. Currently, the trust fund provides service to more than 180,000 families in Malaysia. Provided services include micro-financing, compulsory savings and welfare funds for the poor and marginalized.

As the lead agency in disaster management, the National Security council (NSC) has been organizing Community-Based Disaster Management programmes in collaboration with other agencies such as the Malaysian Meteorological Department (MMD), the Department of Town and Country Planning Peninsular Malaysia, the Ministry of Health and the Department of Irrigation and Drainage throughout the country. The program is aligned with the slogan: “Community Resilience through Disaster Awareness”. For the year 2010, 8 series of the program were done at various locations of Malaysia involving about 2,000 communities. The program will continue the year 2011.

Other related awareness programs on landslides, tsunami, and floods have also been organized by the Public Works Department, the Malaysian Meteorological Department, the Ministry of Education and the Southeast Asia Disaster Prevention Institute of the National University of Malaysia (UKM) on their own initiatives with the supervision of the NSC.

Bordering with countries that sits on active tectonic plates like Indonesia and the Philippines, increases the chances for Malaysia to be inflicted with earthquake related disasters and the 2004 tsunami incident bears testimony to this. As such, the NSC and the Malaysian Meteorological Department (MMD) has been proactive in conducting drill exercises in tsunami prone areas involving the local communities to instill awareness and equip them with knowledge on how to properly react during disasters. Past exercises have been done in Tawau, Kuala Kedah and Langkawi (Pantai Chenang). For 2011, exercises have been planned for communities living in Kedah (Langkawi and Kuala Muda, Pulau Pinang (Tg. Bungah) as well as Sabah (Kudat and Lahad Datu)

References

¹ <http://www.my.undp.org/content/malaysia/en/home/countryinfo/>

² <https://www.cia.gov/contact-cia/index.html>

³ <http://hdr.undp.org/en/countries/profiles/MYS>

⁴ <http://data.un.org/CountryProfile.aspx?crName=Malaysia>

⁵ Malaysia Country Study Guide

⁶<https://openknowledge.worldbank.org/bitstream/handle/10986/12628/714530v20ESW0W0AN0appendices0June12.pdf?sequence=1>

⁷<http://www.adrc.asia/nationinformation.php?NationCode=458&Lang=en&NationNum=16>

⁸ <http://www.aipasecretariat.org/wp-content/uploads/2011/07/1.Malaysia-Disaster-Response-Management.pdf>

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