

Malaysia Country Handbook

1. This handbook provides basic reference information on Malaysia, including its geography, history, government, military forces, and communications and transportation networks. This information is intended to familiarize military personnel with local customs and area knowledge to assist them during their assignment to Malaysian.
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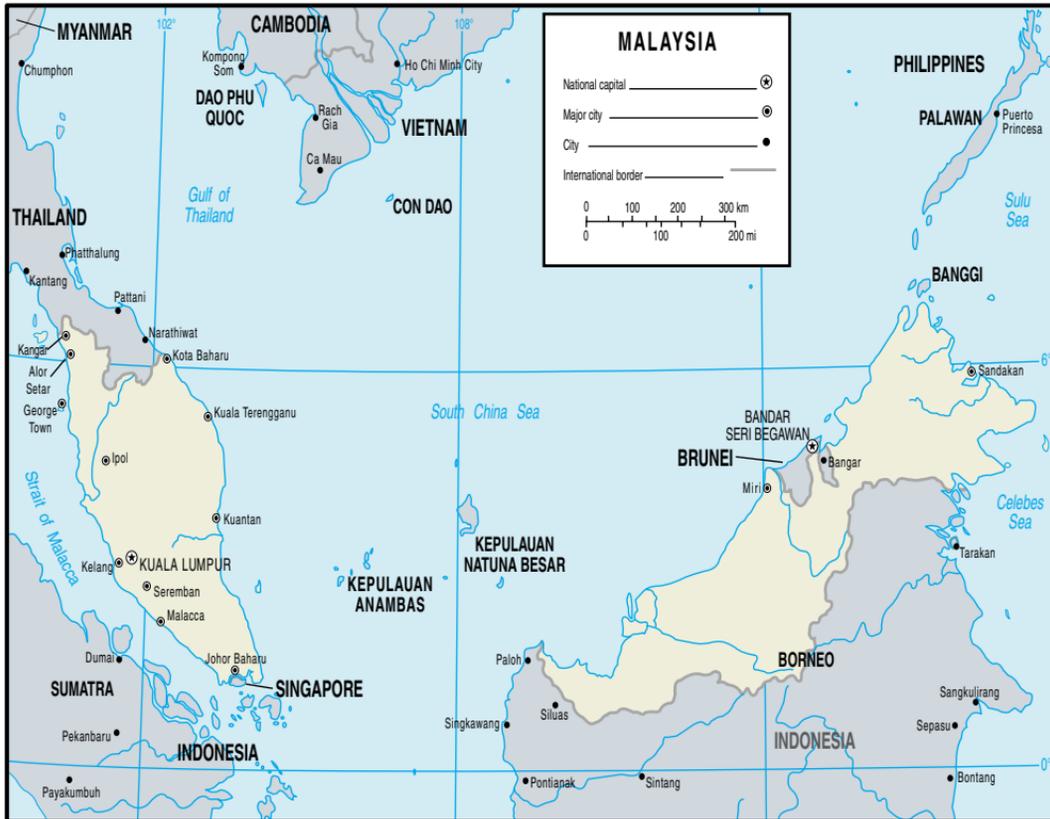
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KEY FACTS

Country Name. Malaysia

Country Code. MYS

Chief of State-Paramount Ruler. His Majesty Tuanku Syed Siraj ud-din ibn al-Marhum Tengku Syed Petra Jamalulail, King of Malaysia; elected king on 12 December 2001 and installed 13 December 2001.

Capital. Kuala Lumpur

National Flag. Fourteen 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 crescent and the star are traditional symbols of Islam.

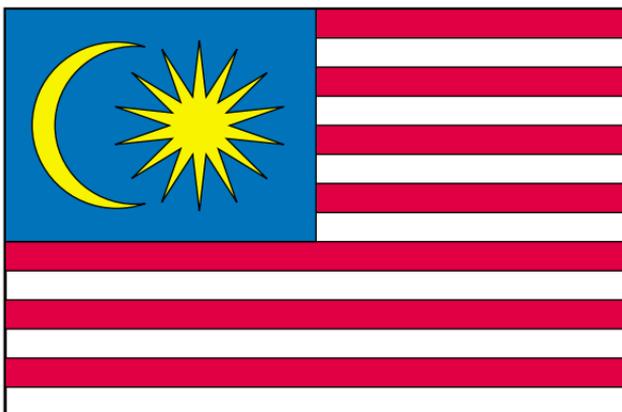
Time Zone. GMT +8

Population. 22,229,040 (2001); average annual growth rate – 1.96 percent.

Languages. Bhasa Malaysia (official), English, Chinese, and Tamil

Currency. The local currency is the Malaysian ringgit (RM), which is divided into 100 sen. Notes in circulation are RM1, RM5, RM10, RM20, RM50, RM100, RM500, and RM1000; the coins are 1, 5, 10, 20, and 50 sen, and RM1. All major credit cards are widely accepted at major hotels and restaurants.

Exchange Rate. US\$1 = RM3.800; RM1 = US\$0.2632; 12 March 2001



National Flag

U.S. MISSION

U.S. Embassy

Ambassador. Ambassador Marie T. Huhtala

Location. 376 Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia

Telephone. 60-3-2168-5000

Fax. 60-3-242-2207

Entry Requirements

Passport/Visa Requirements

A passport, valid for at least six months, is necessary for U.S. travelers entering Malaysia; however, a visa is not needed for stays up to 3 months. The Embassy of Malaysia, 2401 Massachusetts Avenue, N.W. Washington, D.C. 20008, telephone (202) 328-2700, or the Malaysian Consulate located in New York, telephone (212) 328-2700 can provide additional information. The Malaysian government's website, <http://www.jarring.my>, has additional travel information.

Immunization Requirements

A yellow fever vaccination is required if coming from an infected area, and is recommended for travel in Malaysia. Visitors from yellow fever infected areas and several African and Latin American countries must provide vaccination certificates.

Customs Restrictions

The following items can be brought into Malaysia duty free: one liter (1.06 quart) of alcohol, 225 grams (7.87 ounces) of tobacco (200 cigarettes), and cosmetics valued up to RM200. The list of prohibited items includes: all goods from Israel, weapons (including replicas), pornography, fireworks, narcotics, *batik sarongs*, and any reproduction of verses from the *Qur'an*.

GEOGRAPHY AND CLIMATE

Geography

Land Statistics (sq km/sq mi)

Total Area : 329,750/128,603

Land Area: 328,550/128,135

Comparative Area: Slightly larger than New Mexico

Boundaries

The Malaysian peninsula is bordered in the north by Thailand, in the west by the Strait of Malacca, in the east by the South China Sea, and in the south by Singapore. Malaysia shares borders on the island of Borneo with Brunei and Indonesia. Its 2,669 kilometers (1,655 miles) of borders include 381 kilometers (236 miles) with Brunei; 1,782 kilometers (1,105 miles) with Indonesia; and 506 kilometers (314 miles) with Thailand.

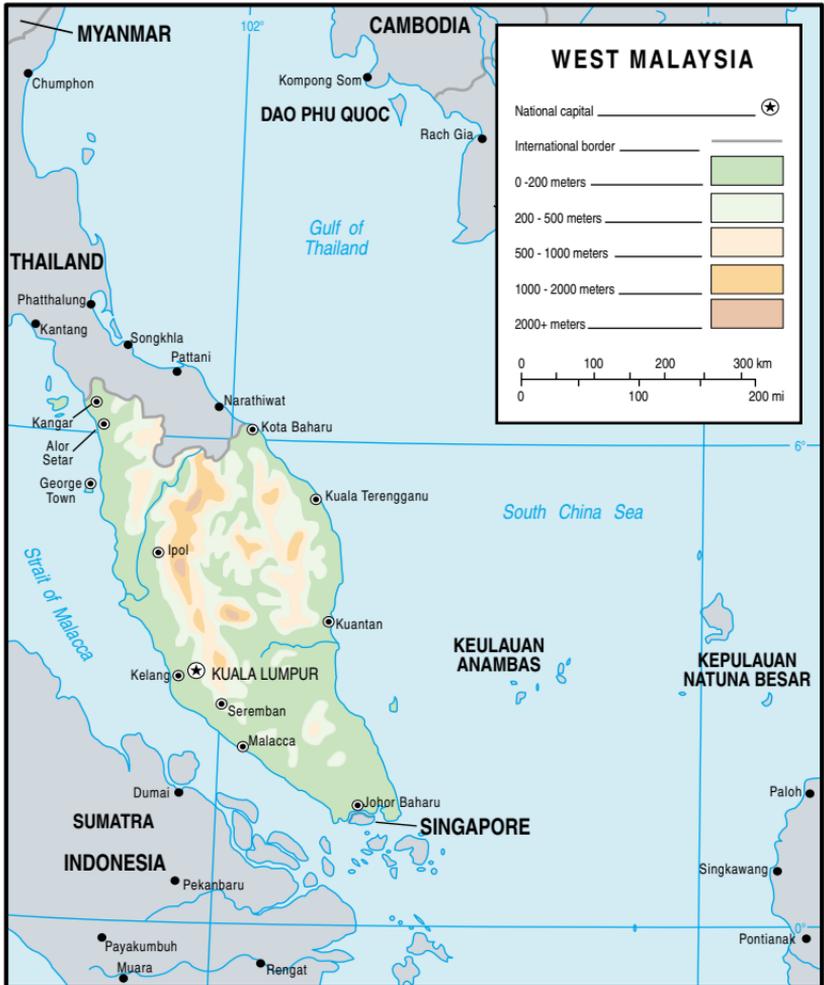
Malaysia's 4,675 kilometers (2,899 miles) of coastline includes 2,068 kilometers (1,282 miles) on peninsular Malaysia and 607 kilometers (376 miles) on East Malaysia. Malaysia's maritime claims include territorial seas out to 12 nautical miles and exclusive economic and fishing zones out to 200 nautical miles.

Border Disputes

Malaysia is involved in a complex dispute over the Spratly Islands with China, the Philippines, Taiwan, Vietnam, and Brunei. There is also a dispute over the state of Sabah, which is claimed by the Philippines.

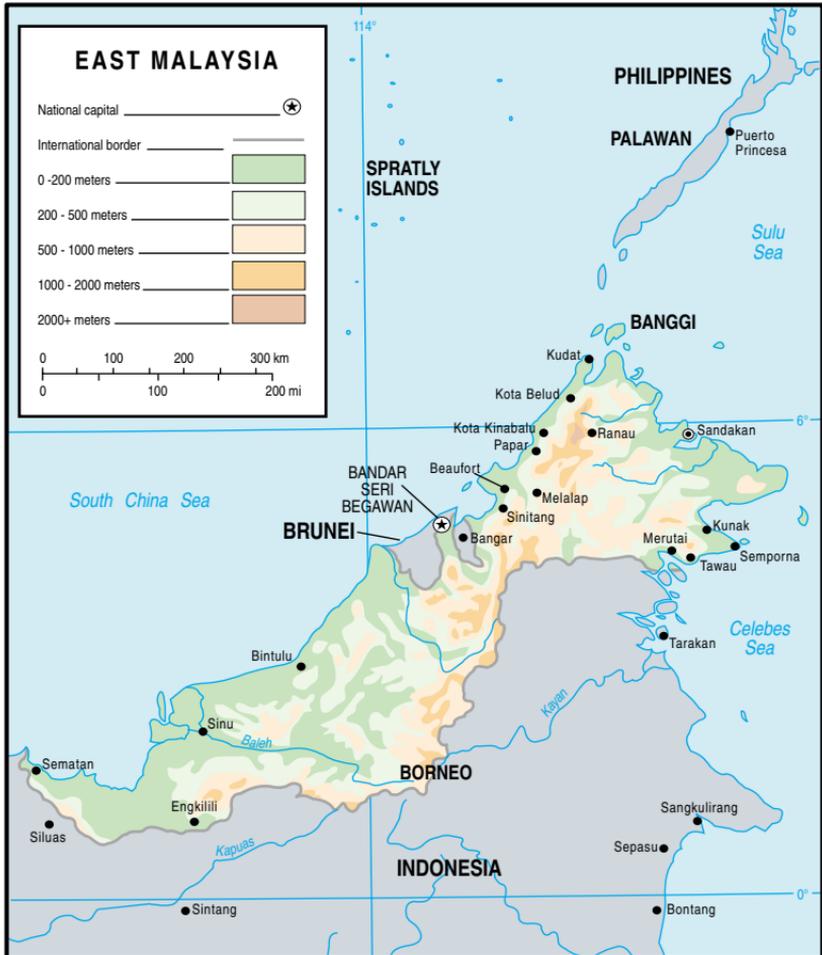
Topography and Drainage

Malaysia consists of two distinct parts, peninsular Malaysia and east Malaysia. Peninsular Malaysia extends 804 kilometers (499 miles) from its northern border with Thailand to its southern connection, a causeway



Topography of West Malaysia

across the shallow Johor Strait, to Singapore. The peninsula is separated from the Indonesian island of Sumatra by the Strait of Malacca.



Topography of East Malaysia

Although the Kra Isthmus in southern Thailand, just above peninsular Malaysia's northern border, is only 64 kilometers (40 miles) wide, the

width of peninsular Malaysia approaches 330 kilometers (205 miles) at its broadest point. The core of the peninsula is dominated by a series of mountain ranges and associated highlands.

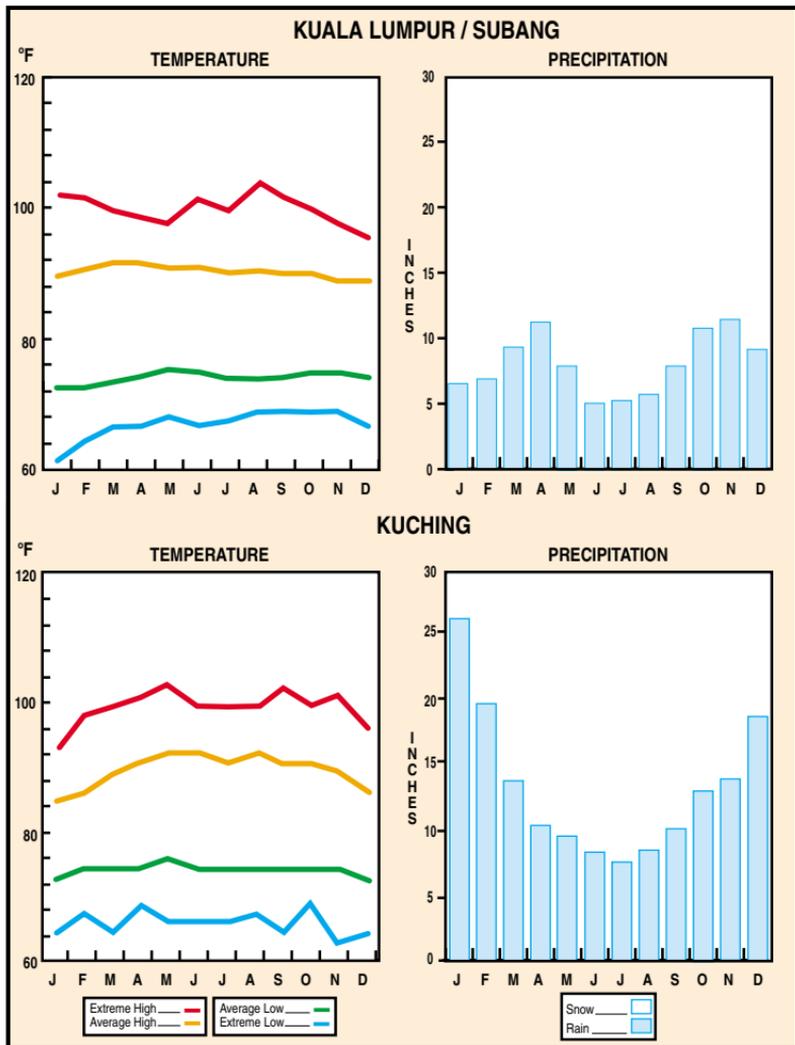
Much of the peninsula is covered by dense jungle, particularly the mountainous, thinly populated, northern half. On the western side, there is a long, fertile plain stretching down to the sea, while on the eastern side the mountains are steeper and the coast is fringed with sandy beaches.

A series of major rivers, which had been the principal means of transportation, runs generally east-west from the interior to the sea. The longest is the Pahang River, which runs for 434 kilometers (269 miles). Because of the high precipitation year round, these rivers do not dry up and are nearly always navigable, although extensive silting in many rivers limits navigation to canoes and rafts.

East Malaysia, comprising more than 50 percent of the country, shares the island of Borneo with the Indonesian state of Kalimantan. East Malaysia is divided between Sarawak and Sabah, with Brunei a small enclave between them. It is covered by dense jungle with many large river systems, particularly in Sarawak.

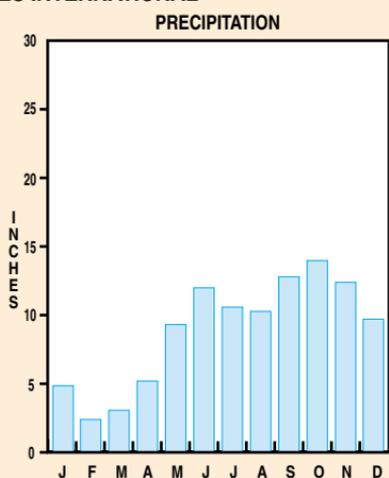
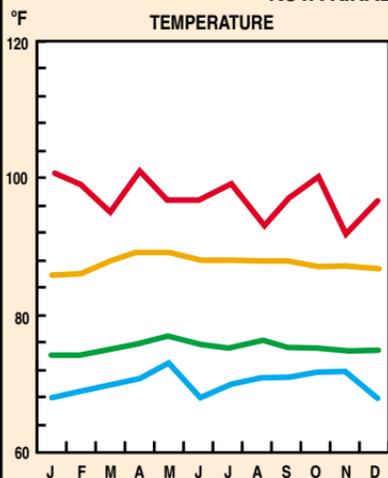
Climate

Malaysia's climate is tropical and influenced by northern monsoons from November through March and by southern monsoons from May through October. Frequent squalls can be expected during the southerly monsoons. Mean annual rainfall ranges from 482 millimeters (19 inches) to more than 1,499 millimeters (59 inches) in some regions. Few places receive less than 102 millimeters (4 inches), even during the driest months. November and December are normally the wettest months. Average daily temperatures range 21 to 32°C (70 to 90°F) throughout the year. Temperatures are cooler in the higher elevations. The weather over the west coast of peninsular Malaysia is generally dry. However, squall lines, which develop over the Strait of Malacca, can cause early morning rain.

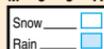
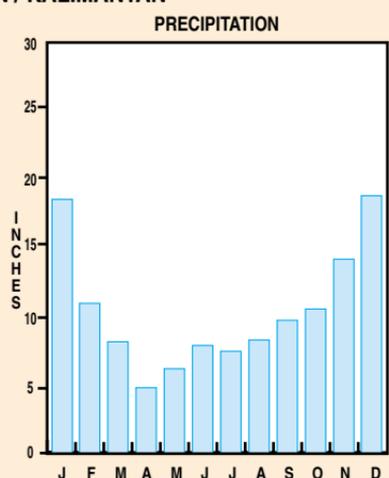
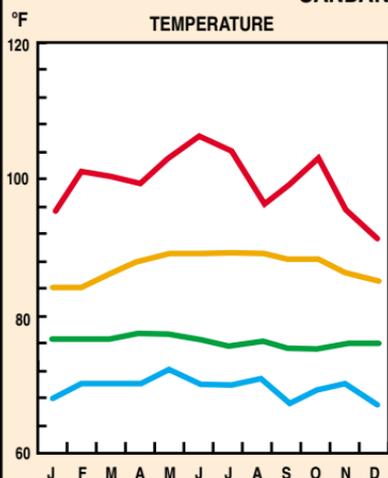


Kuala and Kuching Weather

KOTA KINABALU INTERNATIONAL



SANDAKAN / KALIMANTAN



On the east coast, inland thunderstorms usually occur in the late afternoon and evening. In Sarawak, although the weather is mainly dry, rain may fall in the early morning. In Sabah, the rainfall is closely related to typhoons, which traverse the Philippines.

TRANSPORTATION AND COMMUNICATION

Transportation

Peninsular Malaysia has a heavily congested road and railway system. Congestion is so pronounced that there are now plans to construct a new city south of the capital to relieve population and traffic stresses placed on Kuala Lumpur. Despite these challenges, 90 percent of cargo and passenger movement is made by road. East Malaysia has a very rudimentary road infrastructure (no railways) available in Sarawak and Sabah.

Roads

Malaysia's road system is extensive and well maintained. There are approximately 94,000 kilometers (58,280 miles) of paved roads, of which 16,400 kilometers (10,168 miles) are main roads. One trunk road runs from the Thai border in the north to Singapore in the south. There is also a 928-kilometer (575-mile) interurban toll expressway, which runs east to west, and completes the east-west highway link, and an 869-kilometer (539-mile) north-south toll expressway. A second east-west highway is nearing completion. Malaysian roads are more abundant and better maintained on the peninsula than in Borneo.

Driving in Malaysia requires an international drivers license or a U.S. driver's license for the first 3 months; thereafter, a local license is needed.

Bicycles, motorcycles, and cars are the principal means of transportation; buses, trains, and airplanes are used for longer trips. Traffic moves on the left side of the road. Taxis are plentiful in the cities, but can be



Transportation in West Malaysia

difficult to find during early morning and late afternoon rush hours. The minibus is a practical and inexpensive way of getting around the cities

of Malaysia. Kuala Lumpur has a dense minibus network. Minibuses stop anywhere to pick up and let off passengers while rarely following a specific timetable.

Rail

Malaysia has a modern, comfortable, and economical railway service, although there are basically two railway lines. One runs from Singapore to Kuala Lumpur, Butterworth, and on into Thailand. The other branches from the first line at Gemas and runs through Kuala Lumpur up to the northeast corner of the country near Kota Bharu.

The state-owned Malaysian Railway has approximately 1,700 kilometers (1,054 miles) of standard gauge track. The main railway line follows the west coast and extends 787 kilometers (488 miles) from Singapore, south of peninsular Malaysia, to Butterworth (opposite Penang Island) in the north. From Bukit Merajam, close to Butterworth, the Kedah line runs north to the Thai border at Padang Besar, where connection is made with the State Railway of Thailand. The east coast line extends 582 kilometers (361 miles) from Gemas to Tumpat, in Kelantan. A 21-kilometer (13-mile) branch of rail from Pasir Mas connects with the State Railway of Thailand at Sungei Golok. Branch lines serve the ports at Port Dickson, Telok Anson, and Ports Kelang and Jurong in Singapore. There is also the light rail system that circles the city of Kuala Lumpur.

Malaysia basically has two types of rail service—express and ordinary. Express trains are air-conditioned, are generally first and second class only, and have night trains that offer a choice of sleeper cars or regular seats. The fares for express trains are approximately 20 percent more than fares for ordinary trains.

Air

Malaysia's major international airport is Kuala Lumpur International Airport (KLIA), located approximately 70 kilometers (43 miles) south of Kuala Lumpur. In 1998 KLIA replaced Subang Airport, which was

renamed the Sultan Abdul Aziz Shah Airport, as the major hub for the capital. There are regional airports located at Kota Kinabalu, Penang, Johore Baharu, Kuching, and Pulau Langkawi. In addition, there are airports providing domestic services at Alor Setar, Ipoh, Kota Baharu, Kuala Trengganu, Kuantan, and Melacca, in Peninsular Malaysia; Sibul, Bintulu, and Miri in Sarawak; and Sandakan, Tawau, Lahad Datu, and Labuan in Sabah. There are also numerous smaller airstrips throughout Malaysia.

Major Airports

Airport Name	Geographic Coordinates	Max. Runway Length	Surface	Elevation
KUALA LUMPUR INTERNATIONAL	024444N/ 1014236E	4,125 m (13,530 ft)	Asphalt	21 m (69 ft)
LANGKAWI	061947N/ 0994343E	3,811 m (12,500 ft)	Asphalt	9 m (29 ft)
KOTA KINABALU	055614N/ 1160304E	2,988 m (9,800 ft)	Asphalt	3 m (10 ft)

Maritime

Malaysia has more than 7,000 kilometers (4,340 miles) of rivers. Peninsular Malaysia has about 3,200 kilometers (1,984 miles) of inland waterway, 1,500 (930 miles) at Sabah and a little more than 2,500 kilometers (1,550 miles) in Sarawak. Peninsular Malaysia's most important rivers are the Paerak and the Pahang. In Sabah, the primary waterway is the Kinabatangan; in Sarawak it is the Rejang.

Malaysia has a coastline length of 4,675 kilometers (2,899 miles). It extends from the Andaman Sea at the country's westernmost point, south along the Strait of Malacca to the South China Sea, and the Sulu Sea in the east.

There are no ferry or boat services connecting the peninsula with East Malaysia. On a local level, there are boats between the peninsula and off shore islands.

Ports

The Malaysian government, followed by the private sector, embarked upon massive port development and expansion programs in 1995-1996. The government has been concentrating on improving the infrastructure and utilities surrounding the ports. Kelang is Malaysia's principal port. This complex currently handles 30 percent of Malaysia's seaborne cargo. The next largest ports are at Penang and Johor Baharu; these facilities are undergoing extensive expansion and upgrades, as are principal feeder ports, such as Kuantan and Lumut. A new port is being developed at Tanjung Pelapas on the southwest coast.

In East Malaysia, the ports at Sibu and Kuching (in Sarawak) are being upgraded; plans are being made for a new port at Sabandar Bay, just northeast of Kota Kinabalu in Sabah. Port facilities at Tawau and Sandakan in Sabah are currently being upgraded. The volume handled by Malaysia's ports is expected to grow by 20 percent over the next 5 years.

Communication

Radio and Television

Malaysia uses the European PAL video format. English-language programs share time with broadcasts in Malaysian, Chinese, and Tamil on both radio and television in Malaysia. Voice of America or British Broadcasting Corporation programming can be received with some interference, but Radio Singapore and Radio Australia are usually clear.

Telephone and Telegraph

The telecommunications system in Malaysia is one of the most advanced in Southeast Asia with a robust cellular phone network. International telephone service is good. Intercity service from peninsular Malaysia to Sabah, Sarawak, and Brunei is via microwave radio relay.

Operation of two satellite links and submarine cables provide for other communications services. Malaysia is also cautiously expanding Internet access. However, central government concern regarding completely open access to the Internet is slowing this process. There are 33 television broadcast stations and 28 AM and 3 FM radio stations.

The Malaysian telephone system is similar to that in the United States. Coin-operated telephone booths can be found throughout Kuala Lumpur. Procedures for making a call are the same as in the United States. Trunk calls to other towns and international calls can be made with operator assistance or by dialing direct. Operators speak adequate English. Local calls cost 10 sen for 3 minutes.

International country code = (60)

Local dialing:

Town	Area Code	Town	Area Code
Kuala Lumpur	03	Kuantan	09
Johor Baharu	07	Langkawi	04
Kota Baharu	09		

Newspapers and Magazines

Malaysia has many domestic daily and weekly periodicals with newspapers in English, Malay, Chinese, and Tamil. The main English papers are *The New Straits Times*, the *Star*, and the *Malay Mail*. Also, in the larger cities and hotels, Western periodicals and newspapers are readily available.

Postal Service

Post offices are open daily from 0800 until 1700, and are closed Sundays and on public holidays. The main post office in Kuala Lumpur is open Sunday mornings.

CULTURE

Statistics

Population Patterns

Malaysia's population of 22.2 million (2001 est.) continues to grow at a rate of 2.4 (2000) percent annually; 35 percent of the population is under the age of 15. Malaysia's population encompasses many ethnic groups. By constitutional definition, all Malays are Muslim, even though more than a quarter of the population is Chinese.

Malaysians of Indian descent make up 8 percent of the population and include Hindus, Muslims, Buddhists, and Christians. Eighty-five percent of the Indian community is Tamil. Non-Malay indigenous groups make up more than half of Sarawak's population and 66 percent of Sabah's. They are divided into dozens of ethnic groups but they share some general patterns of living and culture.

Population distribution is uneven, with some 15 million residents concentrated in the lowlands of peninsular Malaysia.

Society

Malays account for nearly 58 percent of the population and have dominated the political system since independence from Britain in 1955. Their self rule has been assured by effective political structures formed around the Malay sultanates; the electoral system still relies on support from the Malay-dominated rural areas for political success at the national level. In Sabah and Sarawak, indigenous minorities retain similar traditional political links.

Ethnic Chinese constitute some 26 percent of the population and enjoy greater economic power than the Malays, but have not matched their ethnic solidarity. The Chinese have long been urbanized, and form a higher proportion of the population in Malaysia than in other Southeast

Asian countries (apart from Singapore). Although favoring Chinese candidates, Chinese voters support both Chinese right-of-center parties in the government coalition and left-of-center opposition parties. Indians, who make up 7 percent of the population, mainly vote along ethnic lines for the Malaysian Indian Congress, a member of the governing coalition known as the Barisan National (Democratic) Party.

From the time of Malaysia's trading pre-eminence, the need to contain and reduce racial and cultural tensions has been used as justification for the tight controls that the government exercises over the media to detain government opponents. The United Malays' National Organization, founded in 1946 as part of the Malay campaign for independence from colonial rule, has led all post-independence governments, but has built its coalitions with parties representing other racial groups.

Education and Literacy Rates

The Malaysian education system provides free education for children between the ages of 6 and 18. There are also private schools. Bahasa Malay (literally, Language of Malaysia) is the primary language of instruction, while English is taught as a second language. Primary education begins at the age of 6. In 1996, 75 percent of eligible children attended primary school. Secondary education begins at age 12. Bahasa Malay is the only medium of instruction in secondary schools. Students who pass the Malaysian Certificate of Education examination at the end of secondary education may take 2 more years of study. This leads to a Higher School Certificate, allowing admission to a university. Students may attend vocational and technical secondary schools instead of the final 2 years of academic education. The literacy rate for Malaysians 15 and older is 83.5 percent.

Language

Most Malaysians are bilingual. Although Bahasa Malay is the national language, English is widely used, especially among the business class and elite. Visitors to Malaysia will find that older Malaysians speak

English more fluently than the younger generation. This is due to the phase out of English as the medium for instruction in 1970. In recent years, the marked deterioration in English language ability and the recognition that English is the international language of commerce has raised doubts about de-emphasizing the English language. However, fluency in Bahasa Malay is seen as key to national unity and identity.

The main dialects of the Chinese in Malaysia are Cantonese, Hokkien, Teochew, Hakka, and Hainnanese.

The main Indian dialects are Tamil, Hindi, Malayalam, Punjabi, and Telegu.

Religion

The variety of religions practiced in Malaysia is a direct reflection of the diverse ethnic groups living there. Although Islam is the state religion, freedom of religion is guaranteed. Almost all Malays and many of the indigenous people belonging to the Bajau, Kedayan, and Melanau groups are Muslims. Some Malays are Christians, although it is unusual. Most Chinese are either Christians or adhere to Buddhist, Taoist, or Confucian beliefs, or a mixture thereof. There are Chinese converts to Islam as well. Indians are mainly Hindu, with some Muslims and Christians. The remaining indigenous people are either Christians or animists and ancestor-worshippers.

Islam

Islam is the Arabic word for submission, and it is the duty of all Muslims to submit themselves to Allah. This profession of faith (the *shadada*) is the first of the five pillars of Islam, the five tenets in the *Qur'an* which guide Muslims in their daily life; they are the *shadada*, the *salah*, the *zakat*, *sawm*, and the *hajj*.

An important holiday for Malay Muslims is the holy month of Ramadan. Ramadan follows the lunar calendar so the days of celebration shift forward every year. Ramadan, the ninth month of the Muslim year, is entirely devoted to meditation and spiritual purification through

self discipline. Muslims are not supposed to eat or drink anything (including water) from sunrise to sunset, and they are also supposed to refrain from physical pleasure (including smoking). Unless they are old, infirm, traveling, or pregnant, Muslims worldwide adhere to these obligations. The fast does not preclude performing normal daily tasks; however, business slows for this month and government offices, if they are open, keep short hours since employees must work without nourishment. Meals are usually taken twice during the hours of darkness, so those following Ramadan sleep fewer hours. After dusk, the faithful say evening prayers and gather for a meal. Guests are frequently invited to share in these feasts. There is also a small meal before sunrise.

Chinese Religions

The Chinese religion in Malaysia is a mix of Taoism, Confucianism, and Buddhism. Taoism combines with old animistic beliefs to teach people how to maintain harmony with the universe. Confucianism guides political and moral aspects of life. Buddhism teaches of the afterlife. Integral parts of the Chinese religion are death, the afterlife, and ancestor worship. Ancestor worship is not practiced as extensively as it is in China, where many generations of ancestors may be worshipped. The Chinese immigrants to Malaysia generally only honor the ancestors of a few generations.

Hinduism

Hinduism postulates that mankind goes through a series of births, deaths, and reincarnations that eventually lead to *moksha*, the spiritual salvation that frees one from *samsara*, the cycle of rebirths. With each rebirth an individual can move closer to, or further from, eventual *moksha*; the deciding factor is a person's *karma*, which is literally a law of cause and effect. Bad actions during life result in more *karma*, ending in lower reincarnation. Conversely, if deeds and actions have been good, the individual will lose *karma* and reincarnate on a higher level and be a step closer to eventual freedom from rebirth. *Dharma*, or the natural law

dictating a person's duty in life, defines the total social, ethical, and spiritual harmony of a Hindu's life.

Customs and Courtesies

Malay customs and traditions center around births, deaths, and other major life events. There are also customs and traditions observed in the royal courts.

Dress

On ceremonial occasions, Malay men wear dress consisting of a *baju* (loose shirt) and a pair of long trousers. A *sarong* is wrapped around the waist and is left to hang halfway over the trousers. The women usually wear *baju kurung* consisting of a loose fitting blouse and a *sarong*, or the *baju kebaya*, a tight-fitting blouse and *sarong*. Dress is very informal among the Chinese. Increasingly, the preference is for Western-style dress. A few conservative Chinese women, however, still wear the *sam-foo* – a jacket and trousers combination. Traditional attire is still common among Indians in Malaysia. The *sari*, a piece of material 6 yards-long wrapped around the body, is popular among women.

Food

The Malaysian food staple is rice with meat, fish, and vegetables. Coconut milk is an essential ingredient in most preparations, and each state has its own specialties. Indian food is hot and spicy. As a staple, Indians eat rice or bread served with various curries.

Greetings

Men greet each other with a handshake. A slight bow or nod of the head is common when greeting an older person. Women and elderly persons seldom shake hands, but may offer verbal greetings. When greeting close male friends, men use both hands to grasp the hand of the other. Business cards are often exchanged after an introduction. A common greeting is “*Salamat pagi*” (Good morning). A casual greeting is “*Halo*” (Hello).

Gestures

It is not polite for anyone to beckon adults, with the exception of close friends. When beckoning all others, fingers are waved together with the palm facing down. Individual fingers are not used for gesturing. Giving and receiving gifts is done with two hands to show respect. Objects are not to be moved with feet. The bottom of a person's foot should not be pointed at another person. Objects are generally not passed with the left hand. When yawning or using a toothpick, the mouth is covered. A slight bow when leaving, entering, or passing by a group of people is a nonverbal "excuse me."

Visiting

Visiting relatives and friends is an important part of Malaysian life, especially when one does not share a house with the extended family. Dropping by without prior arrangement is common, although more urban dwellers call in advance. Guests are often invited to the home for a meal or socializing. When invited, persons are generally not expected to arrive on time. Punctuality is not as important in Malaysia as in Western nations because of the emphasis on people over schedules. Shoes are removed when entering a home. The host will normally serve tea or coffee to guests. Drinks are offered and received with both hands.

Eating

Eating customs differ among ethnic groups. Malays and Indians eat with their hands and spoons. Chinese eat with chopsticks and spoons. Some cultural groups refrain from eating certain foods. For example, Muslims do not eat pork or the meat from predatory animals, and they do not drink alcoholic beverages. Hindus and some Buddhists do not eat beef. Tipping is not generally expected in restaurants because service is usually included in the bill. However, some waiters may expect tips from Westerners based on past experience.

MEDICAL ASSESSMENT

Disease Risks to Deployed Personnel

Food- or Waterborne Diseases

Diarrheal diseases caused by bacteria, protozoa, and viruses are the greatest risk to deployed forces. Risk from hepatitis A, which many Malaysians contract as children, is high. Risk is intermediate for typhoid/paratyphoid fevers, and hepatitis E.

Insect, Tick, and Miteborne Diseases

The main diseases spread by insects in Malaysia are malaria, dengue fever, and Japanese encephalitis (JE). Malaria risk is the highest risk and is year-round, but varies from no risk to very high, depending on location. Major urban areas are risk-free. Dengue fever risk is high, year-round, and countrywide. Risk is elevated in and around urban areas. JE risk is intermediate, year-round, and countrywide. JE risk is highest where rice-field breeding mosquitoes, water birds, and domestic pigs coexist, and when mosquito densities are elevated (associated with increased rainfall or irrigation). Risk of filariasis (transmitted by mosquitoes) depends on location, with inland hilly areas of primary forest and freshwater swampy areas being the elevated risk areas. Ehrlichiosis (transmitted by ticks), chikungunya fever (transmitted by mosquitoes), scrub typhus, and fleaborne typhus are also risks.

Sexually Transmitted and/or Bloodborne Diseases

Sexually transmitted diseases (STDs) are a risk, including gonorrhea, syphilis, and HIV/AIDS. Hepatitis B/D and C, caused by exposure to infected body fluids, also are risks.

Respiratory-borne Diseases

Acute respiratory infections are a risk, particularly in crowded living conditions. Risk of acute respiratory infections such as colds, bronchitis, influenza, pharyngitis, and pneumonia are year-round and countrywide. Tuberculosis levels among the local population are high.

Animal-associated Diseases

Brucellosis occurs in livestock and is spread to humans by consumption of unpasteurized milk products. Additional low risks include leptospirosis (spread primarily by rat urine), gastrointestinal anthrax (human cases are associated with eating infected meat), hantavirus infection (transmitted by inhalation of infective rodent excreta or saliva), and rabies.

Medical Capabilities

Although Malaysia's health care is among the best in the region, it is below U.S. standards. Adequate private medical care exists in Kuala Lumpur and other large cities but is not up to the standards of Western countries. Western-trained physicians and advanced technology are readily available in the best private facilities.

Emergency medical personnel and services are substandard. Individual hospitals and private companies provide ambulance service. Most emergency medical personnel are not trained Emergency Medical Technicians, and many ambulances are only equipped with oxygen. Response times can be slow.

Bahasa Malaysia is the official language. English generally is spoken and is the language of instruction for tertiary education. Although Islam and other religions have medical restrictions that are followed in other countries, Malaysia does not follow these restrictions. For example, male physicians may examine females, blood collection drives are successful despite the fact that some males fear virility may be affected, and birth control generally is successfully followed.

Malaysia is one of the world's leading manufacturers of natural rubber latex products, such as surgical gloves, catheters, and condoms. Outside the rubber products industry, Malaysia has little domestic medical device production beyond basic medical supplies and items, such as scalpels or hospital furniture. Malaysia imports 70 percent of its pharmaceuticals. Local drug manufacturers concentrate on production of inexpensive generic drugs, over-the-counter medicines, or traditional remedies. Production is largely intended for domestic consumption.

The blood supply in Malaysia is not safe. Although blood banks screen for hepatitis B and C, syphilis, and HIV, screening for malaria is inconsistent. The National Blood Transfusion Service, located at the Kuala Lumpur General Hospital, is the reference and coordinating center for blood banks in Peninsular Malaysia.

Key Medical Facilities

Facility	Subang Jaya Medical Centre (formerly Penawar Hospital)
<i>Coordinates</i>	030439N/1013542E
<i>Location</i>	Number 1, Jalan SS 12/1A, Subang Jaya, 47500 Petaling Jaya, Selangor Darul Ehsan
<i>Telephone</i>	734-1212
<i>Type</i>	Private
<i>Beds</i>	375
<i>Services</i>	Medical--general, cardiology, dermatology, emergency medicine, endocrinology, gastroenterology, hematology, internal medicine, nephrology, neurology, nuclear medicine, oncology, pediatrics, psychiatry, pulmonology, rheumatology; Surgical--general, anesthesiology, cardiothoracic, cardiovascular, ear/nose/throat (ENT), maxillofacial, neuro surgery, OB/GYN, ophthalmology, pediatric, orthopedics, plastic, urology;

ancillary services--blood bank, laboratory, 24-hour pharmacy, physical therapy, x-ray, intensive care unit (ICU), cardiac care unit, neonatal ICU, pediatric ICU, burn unit, trauma unit, cardiac angiography, computerized tomography (CT) scanner, hemodialysis, lithotripter, magnetic resonance imaging (MRI).

Comments

Best reputation in the city. The Heart Center and Liver Transplant Center are outstanding. Ninety-eight percent of physicians are trained in Western medical programs.

Facility

Coordinates

Location

Telephone

Type

Beds

Services

Kuala Lumpur General Hospital

031000N/1014200E

Jalan Pahang, 50586 Kuala Lumpur

03-2921044

Government

3,500

Medical--general, cardiology, dermatology, dentistry, emergency medicine, endocrinology, gastroenterology, geriatrics, hematology, infectious disease, internal medicine, nephrology, neurology, nuclear medicine, occupational medicine, oncology, pathology, pediatrics, psychiatry, radiology, and rheumatology; surgical--general, anesthesiology, ENT, neurosurgery, OB/GYN, ophthalmology, oral, pediatric, orthopedics, plastic, urology, vascular; ancillary services--blood bank, 24-hour emergency room, laboratory, pharmacy, physical therapy, x-ray, burn unit, intensive care unit, cardiac care unit, and neonatal intensive care.

Comments

Twenty-five buildings scattered over 64 acres of land in the central business district of Kuala Lumpur. Largest medical facility in Malaysia. National referral hospital. Nursing school.

HISTORY

Malaysia came under Muslim influence in the 14th century when the Buddhist Srijava Empire was overthrown. The Muslim Empire remained in power until the Portuguese conquest of its capital at Malacca in 1511. In 1641 the Dutch ousted the Portuguese. The British displaced the Dutch in 1786 except for a brief return to Dutch rule from 1818 to 1824. In the 1820s, the British developed a rubber- and tin-based export economy in the area, with Chinese and Indian laborers, contributing to Malaysia's ethnic diversity. In 1895, the various British protectorates on the Malay peninsula were formed into the Federated States of Malay. The Japanese Army invaded Malaysia in December 1941 for its rich natural resources. The British were quickly defeated by the Japanese forces in February 1942. During the Japanese occupation, large numbers of Chinese established an armed resistance, which, after 1945, became the basis for the post-war communist insurgency. After the Japanese surrender, British forces quickly moved in and re-established the Federated States of Malay. In 1948, this Federation, along with the British protectorates on Borneo, was reorganized to form the Crown Colony of The Federation of Malaya.

The period from 1948 until 1960 is known as the Malayan Emergency. In June 1948, British colonial authorities declared a state of emergency in response to a rebellion by members of the Communist Party of Malaya (CPM). By July 1960 the most serious threat from the CPM had dissipated, and the party had split into three factions based primarily in southern Thailand. However, a large portion of the Malaysian armed forces was still involved in counter-insurgency operations against the CPM until December 1989, when the CPM officially surrendered. In accordance with a tripartite surrender agreement between Malaysia, Thailand, and the CPM, the Malaysian government allowed former CPM members to reintegrate into Malaysian society. This followed a formal pledge by the CPM to abandon its Marxist-Leninist ideology, revoke its call for the armed

overthrow of the national government, and to swear allegiance to the country's ruler. In October 1990, the Malaysian government ended all counterinsurgency operations with the surrender of the remaining 51 members of the last organized insurgent group.

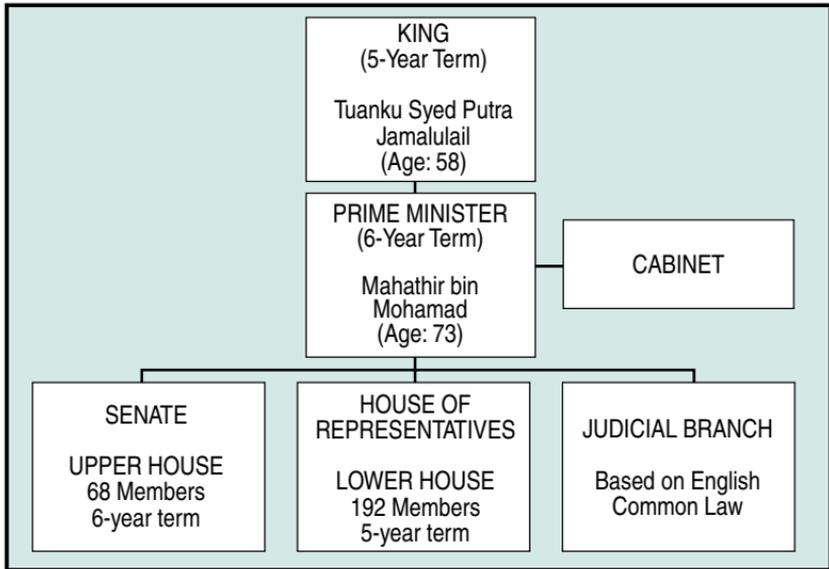
The Federation of Malaya attained independence from the United Kingdom in 1957. In 1963, the Federation of Malaya merged with Singapore and the states of Sarawak and Sabah on Borneo, to form the Federation of Malaysia. In 1965, Singapore seceded from the Federation to form its own nation. The period since independence has been characterized by continued tension between ethnic Malays and Chinese. In 1969, rioting between Malays and Chinese precipitated the resignation of Malaysia's first prime minister, Fisdul Rahman, and resulted in the imprisonment of 10,000 rioters. There has been no widespread ethnic violence since, but distrust and animosity between the Malays and Chinese continues.

From late 1992, Prime Minister Mahathir waged a bitter campaign against the sultans, who had served as the power center since 1955. Previously exempt from criticism, their public, private, and financial dealings were publicly exposed to force them to accept a reduced role in politics. The campaign succeeded in three months, leaving the prime minister in a more dominant position.

GOVERNMENT AND POLITICS

Government

The government of Malaysia is a British style federal constitutional monarchy, consisting of a 68-member upper house and 192-member lower house representing 13 states and 2 federal territories. The country is lead by a king and a prime minister, with most of the actual power being vested with the prime minister. The king is the chief of state or paramount ruler of state and is elected for a 5-year period by a Conference of Rulers, consisting of the hereditary rulers of the nine ethnic pen-



Government Organization

insular Malay states, seven of whom are sultans. The 4 non-Malay states are headed by governors, who are appointed for 4-year terms by the king on the recommendation of the prime minister. Forty-two members of Malaysia's upper house are appointed by the king and serve at his discretion. The remaining members of the upper house are elected by the state legislatures. The members of the lower house are selected every 5 years during the country's national elections.

Key Government Officials

Paramount Ruler	Tuanku Syed Siraj ud-din ibn al-Marhum Tengku Syed Petra Jamalulail
Deputy Paramount Ruler	Sultan Mizan Zainal Abidin

Prime Minister	Doctor Mahathir bin Mohamad
Deputy Prime Minister	Abdullah bin Ahmad Badawi
Minister of Home Affairs	Abdullah bin Haji Ahmad Badawi
Minister of Agriculture	Mohamed Effendi bin Norwawi
Minister of Defense	Mohamed Najib bin Abduhl Razak
Minister of Education	Musa bin Mohamed
Minister of Energy, Telecommunications, and Posts	Leo Moggie Anak Irok
Minister of Finance	Doctor Mahathir bin Mohamad
Minister of Foreign Affairs	Syed Hamid bin Syed Jaafar Albar
Minister of Health	Chua Jui Meng
Minister of International Trade and Industry	Rafidah binti Abdul Aziz

Administrative Divisions

The 13 states are:

Johor	Perlis	Sarawak
Kedah	Pahang	Selangor
Kelantan	Perak	Terengganu
Melaka	Pulau Pinang	
Negeri Sembilan	Sabah	

There are also two federal territories: Labuan and Wilayah Persekutuan.

The States

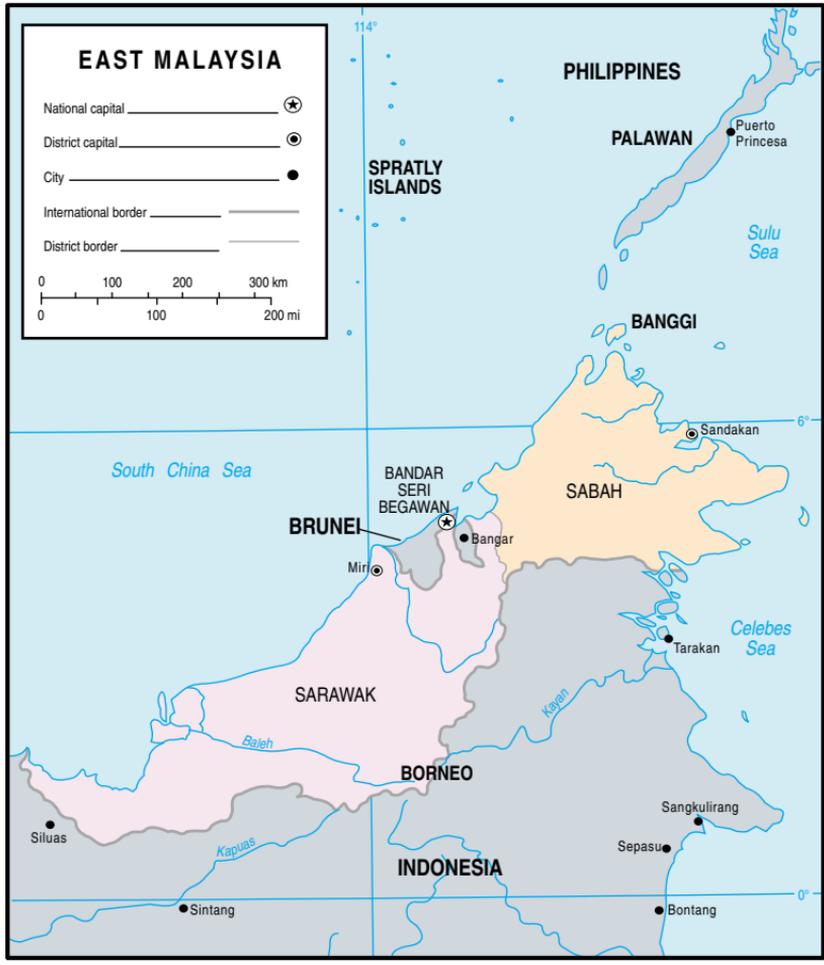
The heads of 9 of the 13 states are hereditary rulers. The ruler of Perlis has the title of *Raja*, and the ruler of Negeri Sembilan is titled *Yang di-Pertuan Resar*. The rest are sultans. The heads of the states of Melaka, Pulau Pinang, Sabah, and Sarawak are each designated *Yang di-Pertua Negeri*, and do not participate in the election of the king. Each of the 13 states has a written constitution and a single legislative assembly. Every state legislature has powers to legislate on matters not reserved for the federal parliament.



Administrative Divisions in West Malaysia

The Constitution

The Federation of Malaya constitution took effect upon independence in 1957. It was subsequently amended to become the constitution of



Administrative Divisions in East Malaysia

Malaysia in 1963. The constitution may only be altered by a two-thirds majority vote in both houses of parliament. There were constitutional amendments, mainly to strengthen the jurisdiction and emergency powers of the federal government, in 1974, 1981, 1983, 1984, and 1988.

According to the constitution, Malaysia is a constitutional monarchy. The nine hereditary rulers of the Malay states elect one of their number to be *Yang di-Pertuan Agong* (king) and another to be *Timbalan Yang Di-Pertuan Agong* (deputy king) for 5-year terms.

The Judicial Branch

The judicial branch is generally based upon English common law and, except for separate Muslim religious and local native courts, is wholly federal.

The Supreme Court is the highest court of appeal, having replaced the right-of-appeal to the Privy Council in London in 1983. However, there is a limited right-of-appeal from the Supreme Court to Malaysia's king. The Supreme Court has exclusive jurisdiction over appeals from the high courts and also arbitrates in disputes between state and federal governments or between state governments.

Below the Supreme Court, there are two high courts, one for peninsular Malaysia and the other for Sabah and Sarawak. Inferior courts include sessions courts, magistrates' courts, Penghulu's courts in peninsular Malaysia and native courts in Sabah and Sarawak. There are also juvenile courts. The legal system is loosely based on English common law; although Islam is Malaysia's official religion, federal laws are secular.

At the state level, there are also religious *Kadi's* courts, which implement Islamic *shari'a* law. Since the 1980s, Islamic laws have been enforced more rigorously in relation to the fasting rules during Ramadan, sexual behavior, mosque attendance, and the collection of obligatory alms taxes. There is also rigorous enforcement against drug-related crimes, with first time offenders sometimes receiving the death penalty.

Since the late 1980s, the executive branch has significantly undermined the independence and power of the judiciary. Legislation in 1988 amended the constitution to allow the state to choose judges for particular cases and to restrict the role of judges and magistrates to apportioning

guilt and to assigning precise penalties. The Supreme Court is apparently exempt from the provisions of the constitutional amendments.

Supreme Head of State

The king is the supreme head of Malaysia and supreme commander of the armed forces. Every act of government is derived from his authority, although the advice of parliament and the cabinet is taken into consideration. The appointment of a prime minister is at the king's discretion, and he has the right to refuse to dissolve parliament even against the advice of the prime minister. The judges of the federal court and the high courts are appointed by the king, on the advice of the prime minister. Only one of the nine hereditary rulers can be elected king. Election is by secret ballot, voting for or against each ruler, starting with the senior. The first ruler to obtain five votes is declared elected. The deputy king exercises no powers in the ordinary course, but is immediately available to fill the post of *Yang di-Pertuan Agung* and carry out his functions in the latter's absence or disability.

Conference of Rulers

The Conference of Rulers consists of the rulers and the heads of the other states. Its prime duty is the election of the king. The Conference must be consulted in the appointment of judges, the auditor-general, the election commission, and the services commissions. It must also be consulted and concur in the alteration of state boundaries, on Islamic religious acts and observances, and any bill to amend the constitution. Consultation is mandatory in matters affecting public policy or the special position of the Malays of Sabah and Sarawak. The Conference also considers matters affecting the rights, prerogatives, and privileges of the rulers themselves.

Federal Parliament

Parliament has two governing bodies — the Senate (*Dewan Negara*) and the House of Representatives (*Dean Rakyat*). The Senate has a mem-

bership of 53. Each state legislature elects two senators; these may be members of the State Legislative Assembly. The remaining four senators represent the two federal territories, Kuala Lumpur and the island of Labuan. The Senate may initiate legislation, but all proposed legislation for the granting of funds must be introduced in the House of Representatives. All legislative measures require approval by both Houses of Parliament before being presented to the king. Senators serve for a period of 3 years. Parliament can, by statute, increase the number of senators elected from each state to three. The House of Representatives consists of 193 elected members. Of these, 144 are from peninsular Malaysia (including several from Kuala Lumpur), 27 from Sarawak, and 21 from Sabah (including one from Labuan). A term in the House of Representatives is limited to 5 years, after which time a new general election must be held. The *Yang di-Pertuan Agung* may dissolve Parliament if the prime minister so advises.

The Cabinet

The king appoints a cabinet, consisting of the prime minister and an unspecified number of ministers, who must all be members of Parliament.

Politics

Political Parties

With some minor changes in its composition, the Barisan Nasional (BN) party has ruled the country since 1968. Its primary alliance members are the United Malays National Organization (UMNO), the Malaysian Chinese Association, and



Prime Minister Mohamad

Malaysian Indian Congress. As a result of their dominance, UMNO prime ministers have led successive governments since 1957. In addition to the three original alliance members, the other main parties in the 14-party BN coalition are the Gerakan Rakyat and the Sarawak-based partners, the Parti Pesaka Bumiputra Bersatu, and the Sarawak United People's Party.

The opposition parties include the Democratic Action Party, *Partu Islam se-Malaysia*, *Semangat '46*, *Parti Bersatu Sabah*, and *Parti Keadilan Nasional*.

Foreign Relations

Malaysian foreign policy emphasizes relations with the Association of South-East Asian Nations (ASEAN) and the Muslim world. However, under the "Look East" policy there has also been considerable emphasis on intensifying links, particularly economic ties, with northeast Asia. The Malaysian government stresses its non-aligned status and has often criticized the United States, Australia, and the United Kingdom. It has, nevertheless, retained fairly close security links with these Western powers.

ASEAN. Malaysia was a founding member of ASEAN in 1967 and the organization has subsequently provided a framework for developing political, economic, and bilateral security cooperation measures with neighboring countries. However, largely because of its geographical location, Malaysia is the focus of continuing bilateral tensions within ASEAN.

Malaysia is also a member of the United Nations, the British Commonwealth, International Monetary Fund, Organization of the Islamic Conference, and the Five Power Defense Arrangements with Singapore, Malaysia, the UK, Australia, and New Zealand.

Brunei. A dispute exists over the Limbang Salient, the small strip of land dividing Brunei. Malaysia and Brunei have overlapping claims in

the South China Sea. Despite these differences, both Malaysia and Brunei are on cordial terms.

Indonesia. Malaysia and Indonesia have much in common and this has helped strengthen ties between the two nations. Both are largely Muslim countries with histories of ethnic conflict and both are recently industrialized. However, a territorial dispute over the Sipadan and Ligitan Islands in the Celebes Sea and recent economic and political uncertainties in both countries have generated friction.

The Philippines. The Malaysian territory of Sabah is claimed by the Philippines. While this dispute has caused problems in the past, it is unlikely to lead to any serious friction between the two nations. The Philippines also has overlapping claims with Malaysia in the Spratly Islands. In March 1994, a defense pact between Kuala Lumpur and Manila was signed.

Singapore. Relations with Singapore are strained at times. Because of geographical proximity, the two nations share many common interests, as well as common problems, such as ethnic unrest.

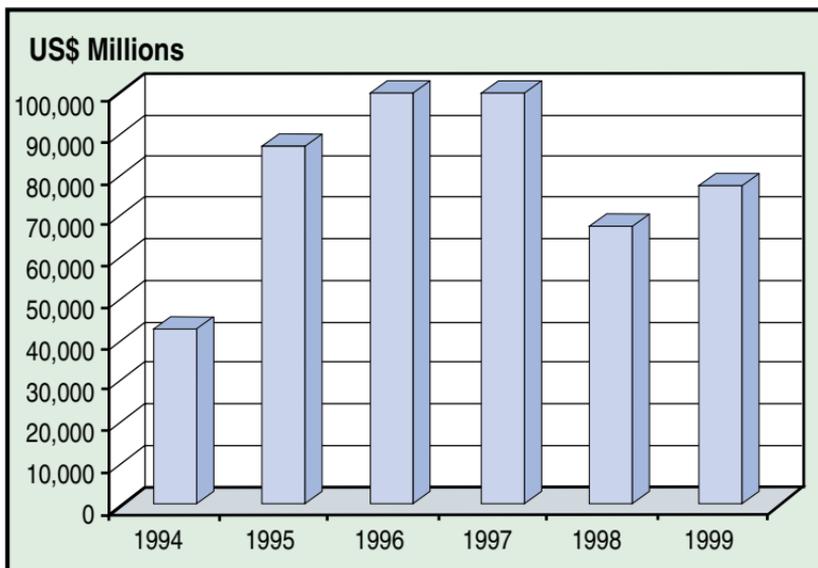
Thailand. Though an area on the Thai-Malaysian border is in dispute, neither country has much to gain from armed conflict. Troops are stationed on their respective borders to combat armed Muslim separatists active in the region. Economically, the countries are in competition, but generally relations are friendly.

United States. The United States has maintained good relations with Malaysia since 1957. Malaysia's role in the stability of the region and commitment to counter-drug enforcement has helped form a solid basis for U.S.-Malaysian relations. Economic, cultural, and military ties have grown strong between the two nations over the years.

ECONOMY

Economically, Malaysia was one of the fastest-developing nations in the world through mid-1997. Buoyed by foreign investment from the United

States and Japan in the mid-1970s and 1980s, Malaysia was transformed from an exporter of raw materials such as petroleum, palm oil, rubber, and tin, to the world's largest exporter of semiconductors and a major exporter of electronic equipment. The Malaysian economy experienced a record of 8 percent average annual growth between 1988 and 1996. This boom resulted in a substantial reduction in poverty. However, Malaysia was severely effected by the economic crisis that engulfed Asia in late 1997. Within months of the crisis, the ringgit's value dropped more than 50 percent against the U.S. dollar, the Malaysian stock market fell by more than 60 percent, and the real GDP growth rate for 1998 was a negative 7.5 percent. To avoid a bailout by the international community, Malaysia initiated a series of austerity measures aimed at preventing a further decline in the economy. Many government projects were halted and social and military budgets were cut, along with government wages. While its economy



Gross Domestic Product

is still fragile, Malaysia experienced a respectable but lower than expected GDP of 3.5 percent in 1999 and 4.8 percent in 2000. GDP growth for 2001 was estimated to be 3 percent.

Economic Statistics

GDP: US\$223.7 billion (2000 est.)

Real Growth: 8.6 percent (2000 est.)

Per Capita: US\$10,300 (2000)

Inflation Rate

(consumer prices): 1.7 percent (2000)

Exports: US\$97.9 billion (2000)

Commodities: Electronic equipment, petroleum and petroleum products, palm oil, wood and wood products, rubber, and textiles.

Trading Partners: 21% United States

18% Singapore

13% Japan

5% United Kingdom

4% Netherlands

4% Germany

3% Thailand

Imports: US\$82.6 billion

Commodities: Machinery and equipment, chemicals, food, and petroleum products.

Trading Partners: 21% Japan

17% United States

14% Singapore

6% Taiwan

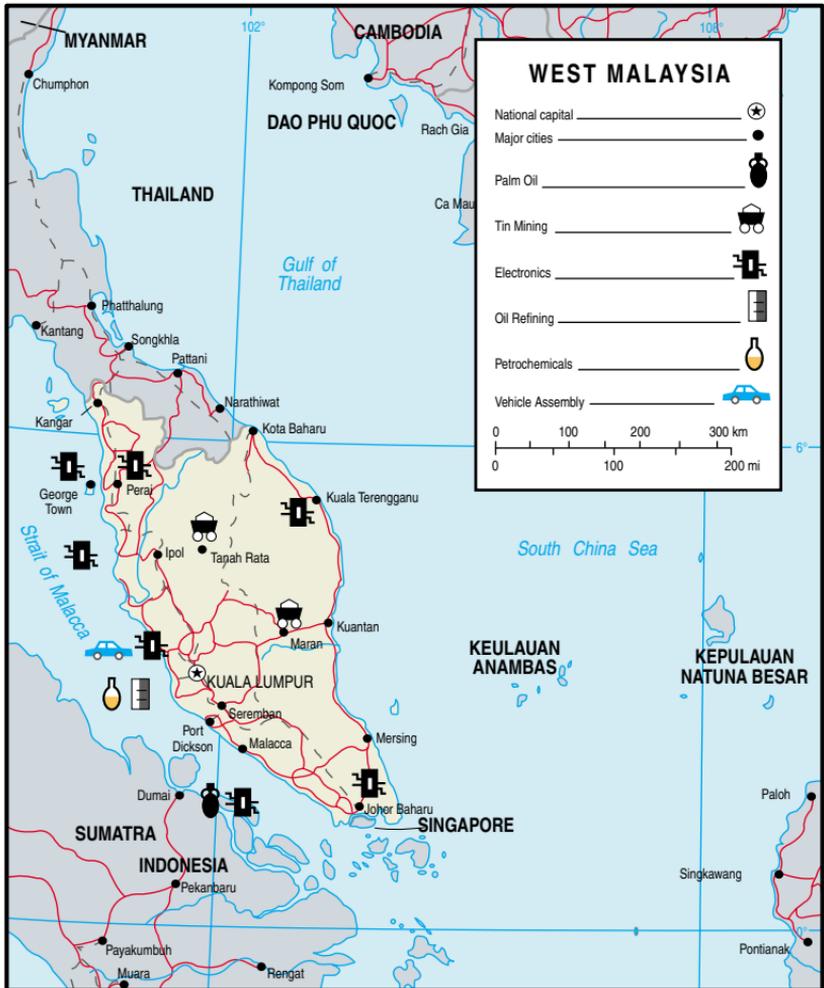
5% South Korea

5% Germany

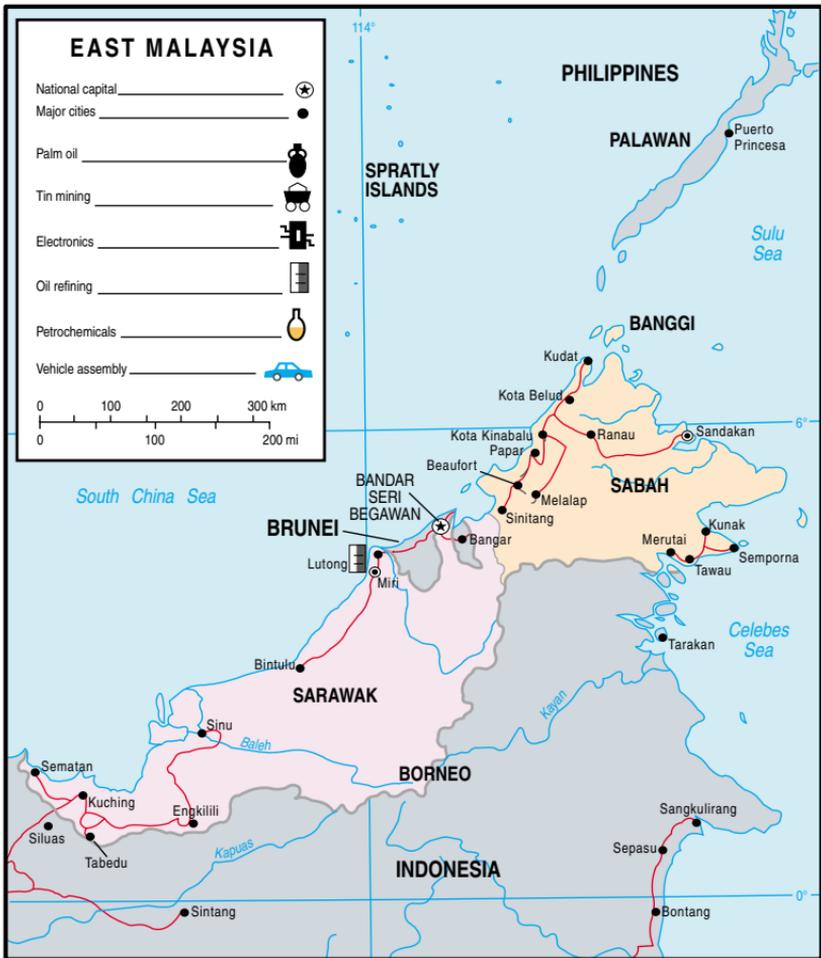
4% United Kingdom

4% Thailand

4% China



West Malaysia Industry



East Malaysia Industry

Tourism

Malaysia has a rapidly growing tourist industry with more than 7 million visitors each year. Tourism is Malaysia's third top foreign-exchange earner behind manufacturing and petroleum, and accounted for 4.8 per cent of the gross national product for 1999.

THREAT

The criminal threat is medium. Although the security environment is generally favorable, Malaysian security services may not be fully capable of deterring, detecting, and/or disrupting all potential terrorist activities.

Terrorist events do happen in Malaysia. In April 2001, members of the Philippine-based terrorist group, Abu Sayyaf, seized several hostages from a dive resort on the Malaysian island of Sipadan. The group initially captured two U.S. citizens, but they escaped while being boarded onto boats.

There is no longer an insurgency problem in Malaysia, following the surrender of the Communist Party of Malaysia in December 1989 and the North Kalimantan Communist Party in October 1990. The jungles of northern Malaysia, however, provide refuge for remnants of fundamentalist Muslim insurgents and bandits operating in southern Thailand and Sabah.

ARMED FORCES

The modern history of the Malaysian Armed Forces (MAF) began with the recruitment of 25 Malay youths in March 1933 to form the first experimental squad of the Malay Regiment. The Regiment was later

Officer Rank Insignia

ARMY	 LEFTENAN MUDA	 LEFTENAN	 KAPTEN	 MEJAR	 LEFTENAN KOLONEL	 KOLONEL	 BRIGADIER JENERAL	 MEJAR JENERAL	 LEFTENAN JENERAL	 JENERAL
NAVY	 LEFTENAN MUDA	 LEFTENAN MADYA	 LEFTENAN	 LEFTENAN KOMANDER	 KOMANDER	 KEPTEN	 LAKSAMANA PERTAMA	 LAKSAMAN A MUDA	 LAKSAMANA MADYA	
AIR FORCE	 LEFTENAN MUDA UDARA	 LEFTENAN UDARA	 KAPTAN UDARA	 MEJAR UDARA	 LEFTENAN KOLONEL UDARA	 KOLONEL UDARA	 BRIGADIER JENERAL UDARA	 MEJAR JENERAL UDARA	 LEFTENAN JENERAL UDARA	



Malaysian Armed Forces

expanded to a full battalion on 1 January 1938 and was known as First Battalion Malay Regiment.

Organization

The king is the commander-in-chief of the MAF. He exercises his authority on the advice of the cabinet, usually through the minister of defense. The National Security Council, chaired by the prime minister, coordinates the command, control, and deployment of the Malaysian security forces: the MAF and units of the Royal Malaysian Police (RMP). The Armed Forces Council, chaired by the minister of defense, has an administrative role. The chief of the defense force (CDF), a four-star army officer, acts as military adviser to the minister of defense and commands the MAF through the service chiefs.

The 85,000-man Army dominates Malaysia's armed forces of 111,500.

Personnel

Key Personnel

Commander in Chief

The Yang di-Pertuan Agong
Tuanku Syed Sirajuddin Syed
Putra Jamalullail

Minister of Defense

YB Dato' Seri Mohd Najib Bin
Tun Haji Razak

Chief of Defense Force

General Dato Seri Mohammed
Zahidi bi Haji Zainuddin

Secretary General of Defense Chief of the Armed Forces

Datuk Hashim Meon
General Mohd Zahidi
bin Haji Zainuddin

Chief of Navy

Vice Admiral Datuk Abu Bakar
bin Abdul Jamal

Chief of Army

General Dato' Md Hashim
bin Hussein

Chief of Air Force

General Datuk Haji Suleiman
bin Mahmud

The Ministry of Defense is located in Kuala Lumpur, and has an integrated staff consisting of both military and civilian members. The Ministry functions as both the policymaker and the command headquarters for the MAF. HQMAF only commands selected operations. The respective services continue to exercise command in their own day-to-day operations.



Minister of Defense Razak

The following comprises the Ministry of Defense:

- 1 Secretariat
 - Secretariat Armed Forces Council
- 2 Branches
 - Branch Office Sabah
 - Branch Office Satawak
- 13 Divisions
 - Judge Advocate General's Office
 - Legal Division
 - Policy Division
 - Internal Audit and General Investigation Division
 - Secretariat Armed Forces Council
 - Defense Science and Technology Center
 - Development Division Procurement Division
 - Defense Industry
 - Defense Reserve Depot
 - Finance and Accounts Division
 - Establishment and Services Division
 - Administration and Public Relations Division
 - Information Technology Division

Army

When Malaysia gained its independence on 31 August 1957, the RMA had become a fairly well developed military whose primary mission was counterinsurgency operations. The army, in the immediate post-independence period, enjoyed a rapid expansion with the support of the government.

The Army is being reshaped. Once a territorially organized, infantry-based service doctrinally focused on counterinsurgency, it is seeking to be more mobile and capable of combined arms operations. Although the Army is being reduced in size, personnel, equipment, logistics, and infrastructure, standards are being upgraded. The Army will be downsized from 111,500 personnel to a more efficient 80,000, and is expected to see vast improvements in mobility, firepower, and communication.

Mission

The primary roles of the Malaysian Army are to:

- Safeguard all national frontiers and boundaries from encroachment during peacetime,
- Repel all hostile forces during wartime and national emergencies, and
- Deal with any form of insurgency, whether assisted by internal or external forces.



Chief of Army Hashim bin Hussein

The secondary roles of the Malaysian Army are to:

- Assist the police and civil authorities in the maintenance of public order and antiterrorism,
- Assist the civil authorities in national disasters and relief work, and
- Assist the civil authorities in national development.

As a supporting role the army can also undertake peacekeeping operations under the auspices of the UN.

Equipment

Armor

Type	Role	Quantity
FV101 Scorpion, 90-mm (GBR)	Light Tank	26
FV107 Ferret Mod 60 (4 x 4) (GBR)	Reconnaissance	60
AML-60 (4 x 4) (w/60-mm mortar) (FRA)	Reconnaissance	140

Type	Role	Quantity
SIMBAS AFSV-90 (6 x 6) (w/90-mm) (BEL)	Reconnaissance	162
Condor (4 x 4) AIFV (w/20-mm) (DEU)	Reconnaissance	459
KIFV (KOR)	Reconnaissance	97
KIFV mortar carriers (KOR)		4
KIFV recovery vehicles (KOR)		3
KIFV command post vehicles (KOR)		3
KIFV ambulances (KOR)		3
V-100 (w/20-mm) (4 x 4) Commando (USA)	APC	184
Condor (4 x 4) (DEU)	APC	459
Stormer (GBR)	APC	26
M-3 Panhard (4 x 4) (FRA)	APC	37
SIMBAS ARC (6 x 6) (BEL)	ARV	24

Artillery

Type	Role	Quantity
120-mm L4 Wombat (GBR)		5
106-mm M40 (USA)	Recoilless Rifle	150
155-mm FH-70 (International)	Towed Howitzer	12
105-mm Model 56 (ITA)	Pack Howitzer	75
105-mm M102A1 (USA)	Towed Howitzer	40
40-mm L70 (SWE)	Towed ADG	36
35-mm GDF-005 (CHE)	Towed ADG	24
81-mm L16 ML (GBR)	Mortar	300

Missiles

Type	Role	Quantity
Javelin (GBR)	MANPAD	48
Starburst (GBR)	MANPAD	48
Rapier (GBR)	Towed SAM	12

Army Maritime Component

The Malaysian Army operates a sizable amphibious force composed mainly of small assault boats and river crossing craft.

Amphibious Craft

Type	Role	Quantity
SRI INDERA SAKAMTI (ex-US LST 512)	Support Landing Craft	2
SRI BANGGI (USA)	Support Landing Craft	2
LCM-6 design (USA)	Landing Craft	5
RCP Class (USA)	Landing Craft	9
LCP Class (USA)	Landing Craft	15
DAMEN 540 Class	Assault Boat	165
Various river crossing craft		250-300

Air Force

The Royal Malaysian Air Force (RMAF) was formed on 1 June 1958. The initial roles for the RMAF were to provide air communications and support ground forces in their military operations against the communist insurgents.

The first Malay-born Chief of Air Force (CAF) was Aviation Vice Marshall Dato Sulaiman Sujak, a former RAF fighter pilot who served as CAF from 1967-1976. The current Chief of Air Force is General Datuk Suleimam Mahmud (as of June 2001).

Organization

The broad goal of the RMAF is to prepare, maintain, and operate an air force that is ready and able to promote and protect Malaysia's national interests. The structure of the RMAF is based on the concepts of central planning and control and decentralized execution. This structure enables RMAF units and squadrons to act as independent entities, with built-in logistic elements to provide daily frontline support.

The command function of the RMAF is vested in the CAF, who is assisted by a deputy, with a headquarters that is divided into two organizational departments. The Department of Plans and Development is responsible for the promulgations of policies, plans, and the future development of all the specialist branches in the RMAF. The Department of Operations is responsible for the formulation of doctrine, contingency plans, exercises, base operations, and employment of RMAF assets.

Equipment

The RMAF is in transition as newer aircraft replace older assets. All A-4 Skyhawks have been replaced by Hawk 100/200s. Eighteen MiG-29 Fulcrums were purchased from Russia, but one crashed in September 1998. Eight F/A-18D Hornet aircraft are being integrated into service at Butterworth.

Fixed-Wing

Type	Role	Quantity
MiG-29SE Fulcrum A (RUS)	Fighter/Attack	18
MiG-29M Fulcrum (RUS)	Fighter/Attack	12
MiG-29UB Fulcrum (RUS)	Fighter/Attack	6
F/A-18D Hornet (USA)	Fighter/Attack	8
F-5E Tiger II (USA)	Fighter/Attack	11
F-5F Tiger II (USA)	Fighter/Attack	3
A-4PTM Skyhawk (USA)	Fighter/Attack	29
Hawk Mk 108 (GBR)	Fighter/Attack	8
Hawk Mk 208 (GBR)	Fighter/Attack	17
MB339A Veltro 2 (ITA)	Fighter/Attack	9
PC7 Turbo-Trainer (CHE)	Fighter/Attack	39
RF-5E Tigereye (USA)	Reconnaissance	2
C-130H-MP Hercules SAR (USA)	Maritime Patrol	3
B200T Super King Air (USA)	Maritime Patrol	4
C-130-30H Hercules (USA)	Transport	6
CN235M (ESP)	Transport	18
DHC4A Caribou (CAN)	Transport	13

Type	Role	Quantity
TA-4PTM Skyhawk tankers (USA)	Transport	4
Falcon 900 VIP (FRA)	Transport	1
F28 Fellowship Mk 1000 (NLD)	VIP Transport	1
Cessna 402B VIP/liaison (USA)	Transport	11
MiG-29UB Fulcrum B (RUS)	Trainer	6
MD3-160 AeroTiga (CHE)	Trainer	9
F-5F Tiger II (USA)	Trainer	3
Bulldog Srs 102 (GBR)	Trainer	10

Rotary-Wing

Type	Role	Quantity
AS-61N Nuri (USA)	Transport	2
S-61A-4 Nuri (USA)	SAR/Transport	32
SA316/B Alouette (FRA)	General Purpose	25
Bell 47G-A5 (USA)	Trainer	7
Super Puma (FRA)	VIP Transport	1

Navy

Organization

The chief of navy is the professional head and overall commander of the Royal Malaysian Navy (RMN) and RMN Volunteer Reserve. He is a member of, and the principal naval adviser to, the Armed Forces Council and the Joint Chiefs Committee. The fleet is organized into the Fleet HQ, HQ Region I (West), HQ Region II (East), and the Navy Special Forces (PASKAL).



Chief of Navy Admiral Dato' Seri Abu Bakar Abdul Jamal

The main role of the RMN is the defense of Malaysia's national maritime interests. These interests include territorial integrity, national sovereignty, security of Malaysian nationals and their properties, and sea lanes of communication around the Strait of Malacca.

Founded in 1934, the Royal Malaysian Navy celebrated its 66th birthday on 27 April 2000. The Navy has 14,000 men and a fleet of the following equipment:

Surface Fleet

Type	Role	Quantity
LEKIU Class (GBR)	Frigate	2
KASTURI Class guided-missile (DEU)	Frigate	2
MUSYTARI Class (KOR)	Corvette	2
ASSAD Class guided-missile (ITA)	Corvette	2
HANDALAN Class (SWE)	Corvette	4
PERDANA Class (FRA)	Corvette	4
JERONG Class (DEU)	Corvette	6
SRI SELANGOR Class (GBR)	Patrol Craft	21
MAHAMIRU Class (ITA)	Mine Warfare	4
SRI INDURAPURA Class (USA)	LST	1
LCU utility landing craft (Hong Kong)	LCU	13

Naval Aviation

Malaysia's naval air component, established in May 1986, routinely operates light helicopters (Westland Wasps) in ASW and SAR configurations from the frigates *LEKIR*, *KASTURI*, and *HANG TUAH*, two LEKIU Class frigates, three MUSYTARI Class corvettes, and the hydrographic research ship, *MUTIARA*. Ex-Royal Navy and South African Wasps were purchased for spares in 1995. Malaysia operates a single air squadron, Naval Air Wing 499 Squadron, based at Lumat.

Special Operation Forces

Malaysian Special Operation Forces (SOF) consists of Group Gerak Khas (GGK) and Pasukan Khas Laut (Paskal). GGK is the largest SOF element in Malaysia. Its mission is to locate, report, harass, and disrupt the enemy through long-range infiltration as well as to operate in close collaboration with guerilla or partisan forces. GGK will also plan, prepare for, and when directed, deploy to conduct, unconventional warfare, internal defense, special reconnaissance, and direct



Malaysian Special Operation Forces

actions, etc., in support of government policy objectives within designated areas of responsibility. GGK continually trains to conduct guerilla/anti-guerilla warfare, escape and evasion, subversion, sabotage, counter-terrorism, and their most highly regarded expertise, jungle warfare. The troopers are also schooled in direct action operations and special reconnaissance. Currently, there are 3 fully equipped regiments (21st, 22nd, and 11th GGK). GGK has seen action in Cambodia, Somalia, Western Sahara, Namibia, and Bosnia.

The Royal Malaysian Navy established a sea commando unit called Special Naval Force or Paskal by its Malay acronym in 1980. The unit was established using commando-trained officers and men from the services' Security Regiment. Some of its personnel are stationed on man-made islands in the Spratlys and in strategic areas within the country's exclusive economic zone.

APPENDIX A: Equipment Recognition

Small Arms

9-mm Sterling



Maximum Effective Range	200 m
Caliber	9-mm x 19 Parabellum
System of Operation	Blowback, selective fire
Overall Length	28 in stock extended, 19 in stock folded
Feed Device	34-rd curved box magazine
Weight (Loaded)	6 lbs

7.62-mm FN FA



Maximum Effective Range	600 m
Caliber	7.62-mm x 51 NATO
System of Operation	Gas, selective or automatic fire
Overall Length	1.095-m stock extended, 845-mm stock folded
Feed Device	20-rd steel or light box magazine
Weight (Loaded)	5.17 kg

7.62-mm Bren L4



Maximum Effective Range

800-1,000 m

Caliber

7.62-mm x 51 NATO

Rate of Fire

520 rds/min (cyclic)

System of Operation

Gas, selective fire

Overall Length

1.156 m

Feed Device

30-rd detachable box magazine

Weight (Loaded)

8.68 kg

7.62-mm FN MAG



Maximum Effective Range	1,500 m
Caliber	7.62-mm x 51 NATO
System of Operation	Gas, automatic
Overall Length	1.26 m
Feed Device	Belt
Weight (Loaded)	13.92 kg (with butt stock and bipod)

.50 cal. Browning M2HB



Maximum Effective Range	1,500 m
Caliber	.50 caliber Browning (12.7-mm x 99)
System of Operation	Short recoil
Overall Length	1.651 m
Feed Device	100-rd disintegrating link belt
Weight (Loaded)	38 kg

Armor

Scorpion 90



Crew	3
Armament	
Main	1 x 90-mm gun
Coaxial	1 x 7.62-mm MG
Smoke	2 x 4
Night Vision	Yes
NBC Capable	Yes
Maximum Road Range	756 km
Maximum Speed	72.5 km/h
Fuel Capacity	391 liters
Fording	1.06 m
Gradient	60%
Vertical Obstacle	0.5 m
Combat Weight	8,723 kg
Height	2.1 m
Length	5.28 m
Width	2.26 m

Condor



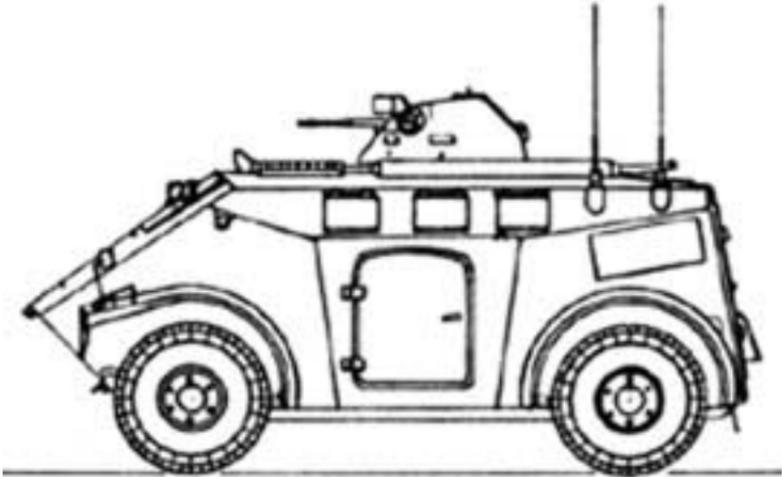
Crew/Passengers	2 + 12
Configuration	4 x 4
Armament	
Main	1 x 20-mm Oerlikon KAA cannon w/220 rds
Coaxial	1 x 7.62-mm w/500 rds
Smoke	3 x 76-mm smoke grenade launchers on either side
Night Vision	Optional
NBC Capable	Optional
Maximum Road Range	900 km
Maximum Speed	100 km/h (road), 10 km/h (water)
Fuel Capacity	280 liters
Fording	Amphibious
Gradient	60 %
Vertical Obstacle	0.55 m
Combat Weight	12,400 kg
Height	2.79 m (turret top)
Length	6.13 m (hull)
Width	2.47 m

KIFV (Korean Infantry Fighting Vehicle)



Crew	3 + 9
Configuration	Tracked
Armament	
Main	1 x 12.7-mm MG
Secondary	1 x 7.62-mm MG
Smoke	1 x 6 smoke grenade launchers
Night Vision	Yes
NBC Capable	Yes
Maximum Road Range	480 km
Maximum Speed	74 km/h
Fuel Capacity	400 liters
Fording	Amphibious
Gradient	60%
Vertical Obstacle	0.64 m
Combat Weight	12,900 kg
Height	1.93 m (hull top)
Length	5.49 m
Width	2.85 m

Panhard M3



Crew/Passengers	2 + 10
Configuration	4 x 4
Armament	
Main	12.7-mm MG
Other	7.62-mm MG
Smoke	Optional
Armor	8 to 12 mm
Night Vision	Optional
NBC Capable	No
Maximum Road Range	600 km
Maximum Speed	90 km/h
Fuel Capacity	165 liters
Fording	Amphibious
Gradient	60%
Vertical Obstacle	0.3 m
Trench	0.8 m
Combat Weight	6,100 kg
Height	2 m (hull top)
Length	4.45 m
Width	2.4 m

Artillery

155-mm FH-70



Crew	7 or 8
Caliber	155-mm
Maximum Range	24,700 (standard projectile), 31,500 (base-bleed projectile)
Rate of Fire	6 rds/min
Prime Mover	6 x 6 truck
Maximum Towing Speed	100 km/h
Length	9.8 m (traveling), 12.43 m (firing)
Weight	9,300 kg

155-mm G5



Crew	5.
Caliber	155-mm.
Maximum Range	30,000 (HE), 50,000 (VLAP).
Rate of Fire	3 rds/min.
Prime Mover	6 x 6 truck.
Maximum Towing Speed	100 km/h.
Length	9.5 m (traveling).
Weight	13,750 kg.

105-mm M102A1



Crew	8
Caliber	105-mm
Maximum Range	11,500 m (HE), 15,100 m (HERA)
Rate of Fire	10 rds/min
Prime Mover	6 x 6 truck
Length	5.182 m (travelling)
Weight	1,496 kg

Astros II



Crew	4
Caliber	180-mm or 300-mm.
Maximum Range	30,000 (SS-30); 35,000 (SS-40); 90,000 (SS-80).
Rate of Fire	32 rds/16 sec (SS-30); 16 rds/16 sec (SS-40); 4 rds/16 sec (SS-80).
Length	7.850 (travelling).
Weight	20,000 kg.

M40A1 106-mm RCL



Crew	3
Maximum Range	3,000 m (HEAT)
Rate of Fire	1 rd/min
Combat Weight	209.5 kg
Length	3.404 m
Width	1.52 m
Height	1.11 m
Prime Mover	4 x 4

Antiaircraft

Starburst



Crew	2
Maximum Range	4000 + m
Combat Weight	25 kg
Length	1.394 m

Javelin



Crew	2
Maximum Range	5,500 m
Combat Weight	43 kg
Length	1.39 m

Bofors 40-mm L/60



Crew	3 - 6
Maximum Range	6,700 m (vertical) 9,900 m (horizontal)
Rate of Fire (Per Barrel)	120 rds/min
Combat Weight	2,676 kg

Swiss GDF 35-mm Twin



Crew	3
Maximum Range	8,500 m (vertical) 11,200 m (horizontal)
Rate of Fire (Per Barrel)	550 rd/min
Combat Weight	6,300 - 6,400 kg

Aircraft

Mk 1 Wasp



Type	Light naval helicopter
Range	260 km
Maximum Take-off Weight	3,000 kg
Height	3.6 m
Length	12.3 m

MiG-29N/



Mission	Land-based, single-seat, counter-air, tactical fighter
Armament	1 x 30-mm GSH-301 single-barrel w/150 rds (port wing root), 2,000 kg (maximum weapon load)
Maximum Range	2,900 km
Maximum Speed	Mach 2.3
Maximum Rate of Climb	19,800 m/min
Weight	20,000 kg
Height	4.73 m
Length	17.32 m (including noseprobe)
Wingspan	11.36 m

Comments: The MiG-29N is a Malaysian local designation of the MiG-29SD. Upgrading of the existing MiG-29Ns will be done to give them multi-role capability by retrofitting them with aerial refueling probes, additional integral fuel tanks, and new Phazotron NO-10M Topaz fire-control radars.

F/A-18D Hornet



Mission	Strike-fighter aircraft
Armament	1 x M61A1 six-barrelled 20-mm gun w/570 rds (in nose). Air-to-air missiles.
Maximum Range	3,333 kn (ferry range, unrefueled)
Maximum Speed	Mach 1.8
Weight	23,560 kg (max takeoff)
Height	4.66 m
Length	17.07 m
Wingspan	11.43 m

Comments: The F/A-18 is a versatile strike-fighter aircraft. That offers high maneuverability and a multi-role radar. Nine external weapon stations enable the Hornet to carry a wide variety of ordnance for combat missions.

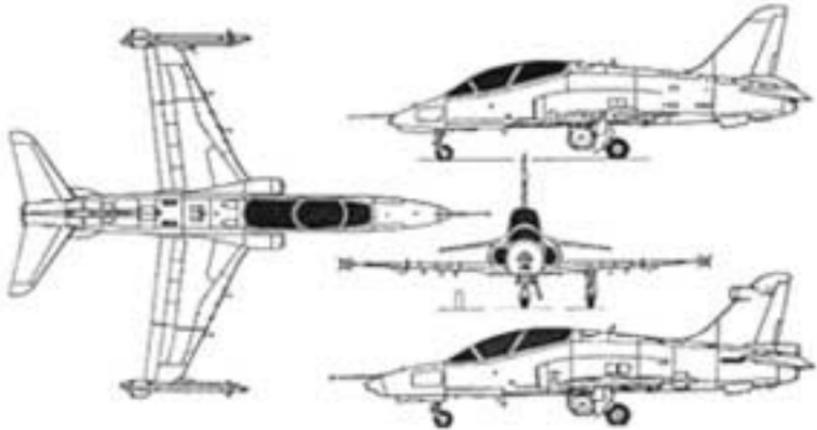
F-5E Tiger II



Mission	Light tactical fighter and reconnaissance aircraft
Armament	2 x M39A2 20-mm guns w/280 rds/gun in forward fuselage
Maximum Range	2,483 km
Maximum Speed	Mach 1.64
Weight	4,410 kg
Height	4.07 m
Length	14.45 m
Wingspan	8.13 m

Comments: The F-5E is a lightweight, supersonic aircraft developed as an inexpensive, easily maintained fighter capable of operating from unimproved airfields. Up to 3,175 kg of mixed ordnance can be carried on its one fuselage and four underwing stations.

Hawk 100 (Dual Seat) / 200 (Single Seat)



Mission	Small, multi-role, British-designed trainer and light attack aircraft
Armament	None internally, 500 kg external
Combat Range	998 km
Maximum Speed	540 knots
Weight	4,400 kg
Length	10.95 m
Height	4.130 m
Wingspan	9.39 m
Comments:	Malaysia maintains 18 Mk 208s.

C-130H-MP Hercules



Mission	Four-engine, medium turboprop transport
Maximum Range	3,179 km
Payload	18,680 kg
Weight	34,690 kg
Length	29.79 m
Height	11.84 m
Wingspan	40.41 m

Comments: The Hercules is the most versatile and widely flown military transport to enter service in the post-WWII era. In addition to the transport fleet, Malaysia maintains an aerial refueling capability for its MIG-29Ns with two KC-130 tankers.

Beechcraft B200T



Mission	Twin-engine turboprop transport
Weight	6,800 kg
Length	13.3 m
Height	4.6 m
Wingspan	17.3 m

Surface Ships

LEKIU-Class (FFG)



Complement	146 (18 officers)
Armament	8 x MM 40 Exocet Block II 1 x Bofors 57-mm SAK MK 2 2 x MSI-30-mm DS 30B guns 6 x Whitehead B 515 324-mm (2 triple) tubes 16 x VLS Seawolf SAM
Maximum Speed	28 kts
Displacement	2,428.2 t
LOA/Beam/Draft	97.5 x 12.8 x 3.6 m

FS 1500 *KASTURI*-Class



Complement	124 (13 officers)
Armament	1 x Creusot-Loire 100-mm gun 1 x Bofors 57-mm gun 2 x Emerson Electric 30-mm guns 1 x Bofors 375-mm (twin) trainable A/S mortar
Maximum Speed	28 kts
Displacement	1,850 t
LOA/Beam/Draft	97.3 x 11.3 x 3.5 m

MUSYTARI-Class OPV



Complement	76 (10 officers)
Armament	1 x Creusot-Loire 100-mm gun 2 x Emerson Electric 30-mm guns
Maximum Speed	22 kts
Displacement	1,300 t
LOA/Beam/Draft	75 x 10.8 x 3.7 m

ESMERALDAS II-Class (PGG)



Complement	47
Armament	6 x OTO Melara/Matra Otomat Teseo Mk2 SSM 1 x OTO Melara 76-mm gun 2 x Breda 40-mm (twin mount) 6 x 324-mm tubes (2 triple mounts) 1 x Selenia/Alsag SAM Launcher
Maximum Speed	36 kts
LOA/Beam/Draft	62.3 x 9.3 x 2.5 m

SPICA M-Class (PTG)



Complement	40 (6 officers)
Armament	4 x MM 38 Exocet SSM 1 x Bofors 57-mm gun 1 x Bofors 40-mm gun
Maximum Speed	34.5 kts
LOA/Beam/Draft	43.6 x 7.1 x 2.4 m

COMBATTANTE II-Class



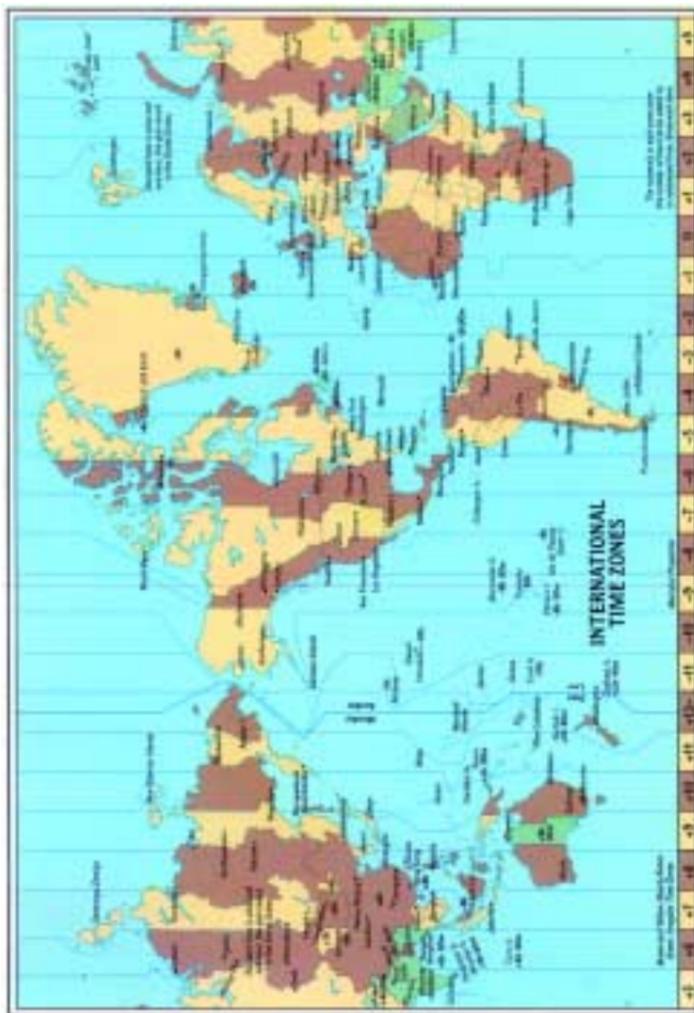
Complement	30 (4 officers)
Armament	2 x MM 38 Exocet SSM 1 x Bofors 57-mm gun 1 x Bofors 40-mm gun
Maximum Speed	36.5 kts
LOA/Beam/Draft	47 x 7 x 3.9 m

LURSSEN TNC 45-Class (PC)



Complement	36 (4 officers)
Armament	1 x Bofors 57-mm gun 1 x Bofors 40-mm gun
Maximum Speed	32 kts
LOA/Beam/Draft	44.9 x 7 x 2.5 m

APPENDIX B: International Time Zones



APPENDIX C: Conversion Charts

When You Know

Units of Length	Multiply by	To find
Millimeters	0.04	Inches
Centimeters	0.39	Inches
Meters	3.28	Feet
Meters	1.09	Yards
Kilometers	0.62	Miles
Inches	25.40	Millimeters
Inches	2.54	Centimeters
Feet	30.48	Centimeters
Yards	0.91	Meters
Miles	1.61	Kilometers

Units of Area

Sq. Centimeters	0.16	Sq. Inches
Sq. Meters	1.20	Sq. Yards
Sq. Kilometers	0.39	Sq. Miles
Hectares	2.47	Acres
Sq. Inches	6.45	Sq. Cm
Sq. Feet	0.09	Sq. Meters
Sq. Yards	0.84	Sq. Meters
Sq. Miles	2.60	Sq. Km
Acres	0.40	Hectares

Units of Mass and Weight

Grams	0.035	Ounces
Kilograms	2.21	Pounds
Tons (100kg)	1.10	Short Tons
Ounces	28.35	Grams
Pounds	0.45	Kilograms
Short Tons	2.12	Tons

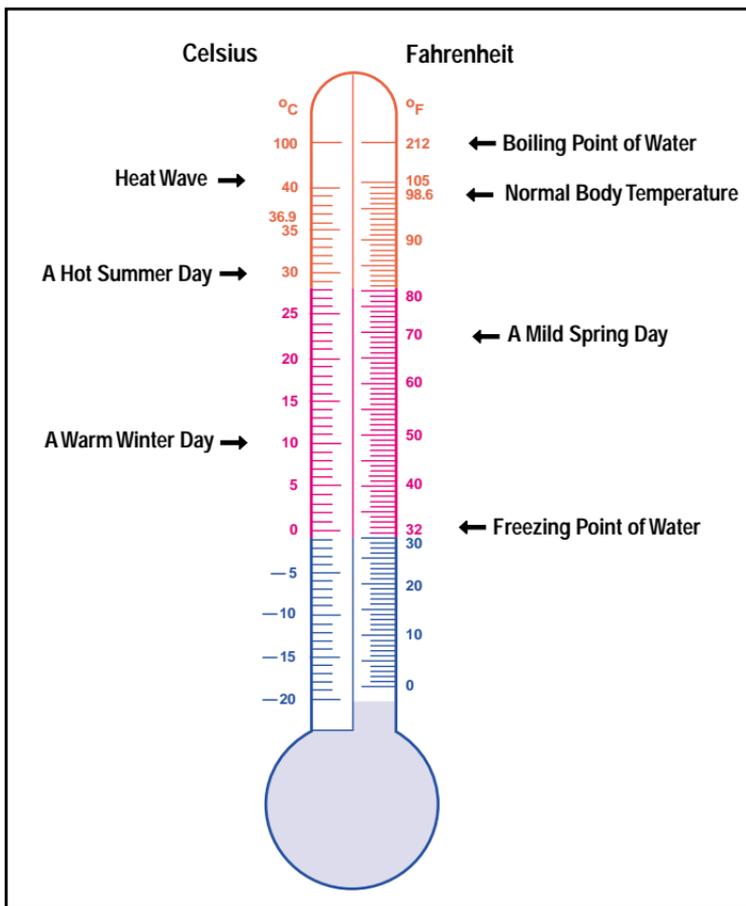
Units of Volume	Multiply by	To find
Milliliters	0.20	Teaspoons
Milliliters	0.06	Tablespoons
Milliliters	0.03	Fluid Ounces
Liters	4.23	Cups
Liters	2.12	Pints
Liters	1.06	Quarts
Liters	0.26	Gallons
Cubic Meters	35.32	Cubic Feet
Cubic Meters	1.35	Cubic Yards
Teaspoons	4.93	Milliliters
Tablespoons	14.78	Milliliters
Fluid Ounces	29.57	Milliliters
Cups	0.24	Liters
Pints	0.47	Liters
Quarts	0.95	Liters
Gallons	3.79	Liters
Cubic Feet	0.03	Cubic Meters
Cubic Yards	0.76	Cubic Meters

Units of Speed

Miles per Hour	1.61	Km per Hour
Km per Hour	0.62	Miles per Hour

Temperature

To convert Celsius into degrees Fahrenheit, multiply Celsius by 1.8 and add 32. To convert degrees Fahrenheit to Celsius, subtract 32 and divide by 1.8.



Temperature Chart

APPENDIX D: Holidays and Calendars

Holidays

Date	Holiday
23-24 January*	Chinese New Year
1 February	Kuala Lumpur City Day
25-26 March*	Hari Raya Puasa (marks the end of Ramadan)
1 May	Malaysia Labor Day
6 May*	Wesak Day (commemorates the birth of Buddha)
1 June*	Hari Raya Haji (commemorates Pilgrimage Season)
5 June	Birthday of the <i>Yang Dipertuan Agung</i>
21 June	Awal Muharram (Islamic New Year)
30 August*	Prophet Mohammed's Birthday
31 August	Malaysia National Day (Independence Day)
13 November*	Deepavali (Indian New Year)

*Exact date depends on lunar calendar

APPENDIX E: Language

Bahasa Malay

Most sounds are the same as in English, although a few vowels and consonants differ. The sounds are nearly the same every time.

a	like the 'a' in 'father'
e	like the 'e' in 'bet' when unstressed; and sometimes hardly pronounced at all, as in the greeting <i>selamat</i> , which sounds like 'slamat' when spoken quickly. When stressed it is like the 'a' in 'may'. There is no general rule as to when the 'e' is stressed or unstressed.
i	like the 'ee' sound in 'meet'
o	like the 'oa' in 'boat'
u	like the 'u' in 'flute'
ai	like 'i' as in 'line'
au	like a drawn-out 'ow' as in 'cow'
ua	at the start of a word, like the 'w' in 'wong'

The pronunciation of consonants is very straightforward. Most sound like English consonants, except:

c	like the 'ch' in 'chair'
g	like the 'g' in 'garden'
h	often very soft, as in <i>oh</i>
kh	hard, like a strong k
ng	like 'ng' in 'singer'
ngg	like 'ng' in 'anger'
j	like the 'j' in 'join'
r	like Spanish trilled 'r'
k	like the English 'k' except when it appears at the end of a word, in which case you stop short of actually saying the 'k' is a single sound like the 'n' in 'new'
ny	

Key Phrases

English

Yes
No
Hello
Sorry
Please
Thank you. (very much)
Excuse me.
Good morning.
Good day. (around midday)
Good afternoon.
Good night.
Good bye. (upon leaving)
Good bye. (when staying)
Madam
Miss
Sir, Mister
Do you speak English?

Can you get an interpreter?

I don't speak your language well.

Please speak slowly.
Please repeat.
I don't understand
What is your name?
My name is...
Where do you live?
Is Mrs. Jones at home?
I am from America.
How are you?

Bahasa Malay

Ja
Tidak
Selamat bertemu
maaf
Silahkan
Terima kasih (banyak)
Ma'afkan saja/permisi
selamat pagi
selamat tengah hari
selamat petang
selamat malam
Selamat tinggal
Selamat jalan
Njonja
Nona
Saudara
Apa saudara dapat bitjara bahasa
Inggeris?
Dapatkah saudara tjarikan djuru
bahasa?
Saja kurang pandai bitjara bahasa
saudara.
Harapapelan.
Harap ulangi.
Saya tidak mengerti
Siapa nama kamu?
Nama saya...
Dimana saudara tinggal?
Apa Njonja Jones ada dirumah?
Saja asal dari America.
Apa khabar?

English

I don't know.
What is this/that?
How many kilometers?
Where is/Which way?
How much?
What time is it now?
Where is the toilet?
Where is the telephone?
Will you please get this
Number for me?
Where can I find a taxi?
What are you doing?
Where are you going?
Please show me.
Please write it.
Please wait until I come back.
Please show me on this map.
What is the name of this street?
Is this the way to...
I want to buy...
Please bring me a cup.
Please bring me the bill.
How much will it cost?
I want to go to ...
Bank
Street/road
Post office
How much for...?
One night
One person
This/that
Big/small
Here/there

Bahasa Malay

Saja tidak tahu.
Apa ini/itu?
Berapa kilometer?
Di mana/Ke mana?
Berapa?
Pukul berapa sekarang?
Dimana kamar ketjil?
Dimana tilpon?
Harapsambungkan
Saja dengan nomor ini?
Dimana saja bisa taxi?
Saudara sedang apa?
Saudara hendak kemana?
Harap tunjukkan.
Harap ditulis.
Harap tunggu sampai saja kembali.
Harap tunjukkan dipeta ini.
Apa nama djalan ini?
Apa djalan ini...
Saja mau beli...
Bawakan saja satu tjangkir.
Saja minta rekening.
Berapa harga?
Saya mau ke...
bank
jalan
pejabat pos
Berapa harga...?
satu malam/semalam
satu orang/seorang
ini/itu
besar/kecil
di sini/di sana

English

Stop

Another

No, not, negative

Open/closed

See

Good, very nice

No good

Expensive

Time and Numbers

When

Tomorrow

Yesterday

Everyday

Today

Tomorrow

Yesterday

This week

Next week

Last week

English

Morning

Afternoon

Evening

Breakfast

Lunch

Dinner

Hour

Week

Year

What is the time?

How long?

7 o'clock

Monday

Bahasa Malay

berhenti

satu lagi

tidak

buka/tutup

lihat

bagus

tidak baik

mahal

bila

besok

kelmarin

setiap hari

hari ini

besok

kemarin

minggu ini

minggu depan

minggu lalu

Bahasa Malay

pagi

sore

malam

makan pagi

makan siang

makan malam

jam

minggu

tahun

pukul berapa?

berapa lama?

pukul tujuh

hari Isnin

English

Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
20
21
30
40
50
53
100
1000

Bahasa Malay

hari Selasa
hari Rabu
hari Kamis
hari Jumaat
hari Sabtu
hari Minggu
satu
dua
tiga
empat
lima
enam
tudjuh
delapan
sembilan
sepuluh
sebelas
dua belas
tiga belas
empat belas
lima belas
dua puluh
dua puluh satu
tiga puluh
empat puluh
lima puluh
lima puluh tiga
seratus
seribu

Vocabulary

English

Airfield
American Embassy
Shop
Sleep
Bed
Room
Bathroom
Toilet
English
Soap
Apple
Banana
Bank
Breakfast
Church
Beans
Soup
Beefsteak
Beer
Bottled water
Bread
Butter
Cabbage
Cake
Candy
Cheese
Chicken
Chocolate
Clear
Cloudy
Coffee
Cold

Bahasa Malay

lapangan terbang
Kedutaan Amerika
kedai
tidur
tempat tidur
bilik
bilik mandi
tandas, bilik air
Bahasa Malay
sabun
appel
pisang
bank
makan pagi
geredja
buntjis
sup
bistik
bier
air minum di-botol
roti
mentega
daunkol
kueh
gula-gula
kedju
ajam
tjoklat
terang
mendung
kopi
dingin

English

Cool
Cream
Eggs
Fish
Foggy
Fork
Glass
Grapes
Grocery store
Hot
Hotel
Lemons
English
Mangoes
Market place
Meat
Milk
Oranges
Park
Peaches
Pears
Pepper
Pineapples
Plate
Police station
Pork
Post office
potatoes
Radio station
Railroad station
Restaurant
Rice (cooked)
Salt

Bahasa Malay

sedjuk
sari susu
telur
ikan
berkabut
garpu
gelas
buah anggur
toko makanan
panas
hotel
djeruk citroen
Bahasa Malay
mangga
menudju kepasar
daging
susu
djeruk keprok
taman
buah tuffah farsi
buah per
meritja
buah nenas
piring
kantor polisi
daging babi
kantor pos
kentang
stasiun radio
stasiun keretaapi
restoran
nasi
garam

English

Soap
Spoon
Store
Sugar
Tea
Toilet paper
Towel
Vegetables
Plain rice
Fried rice
Fried noodles
Noodle soup
Soup
Fish
Chicken
Egg
Pork
Frog
Crab
Beef
Prawns
Potato
Vegetables
Sweet
Hot
Spicy hot
Cold
Red
Yellow
Blue
White
Black
Green

Bahasa Malay

sabun
sendok
toko
gula
teh
kertas kamar ketjil
anduk
sajuran
nasi kosong
nasi goreng
mi goreng
mi kuah
sup
ikan
ayam
telur
babi
kodok
kepiting/detam
daging lembu
udang
kentang
sayur-sayuran
manis
panas
pedas
sejuk/cool
merah
kuning
biru
putih
hitam
hidjau

English

Purple
Which way is...
North
South
East
West

Bahasa Malay

ungu
Mana...
Utara
Selatan
Timur
Barat

Military Vocabulary**English**

Aircraft
Aircraft carrier
Air force
Ammunition
Anti-air artillery
Army
Artillery
Aviation
Battalion
Battleship
Bomb
Camouflage
Coastal defense
Corps
Cruiser (ship)
Destroyer (ship)
Division
Engineer
Garrison
Guerrilla
Gun
Hand grenade
Headquarters
Infantry

Bahasa Malay

kapal terbang
kapal induk
angkatan udara
aminisi
meriam penangkis
tentara
artileri
penerbangan
batalyon
kapal perang
membom
penyamaran
pertahanan pantai
korps
kapal jelajah
kapal perusak
divisi
insinyur
garnisum
durhaka
bedil
granat tangan
markas besar
infantri

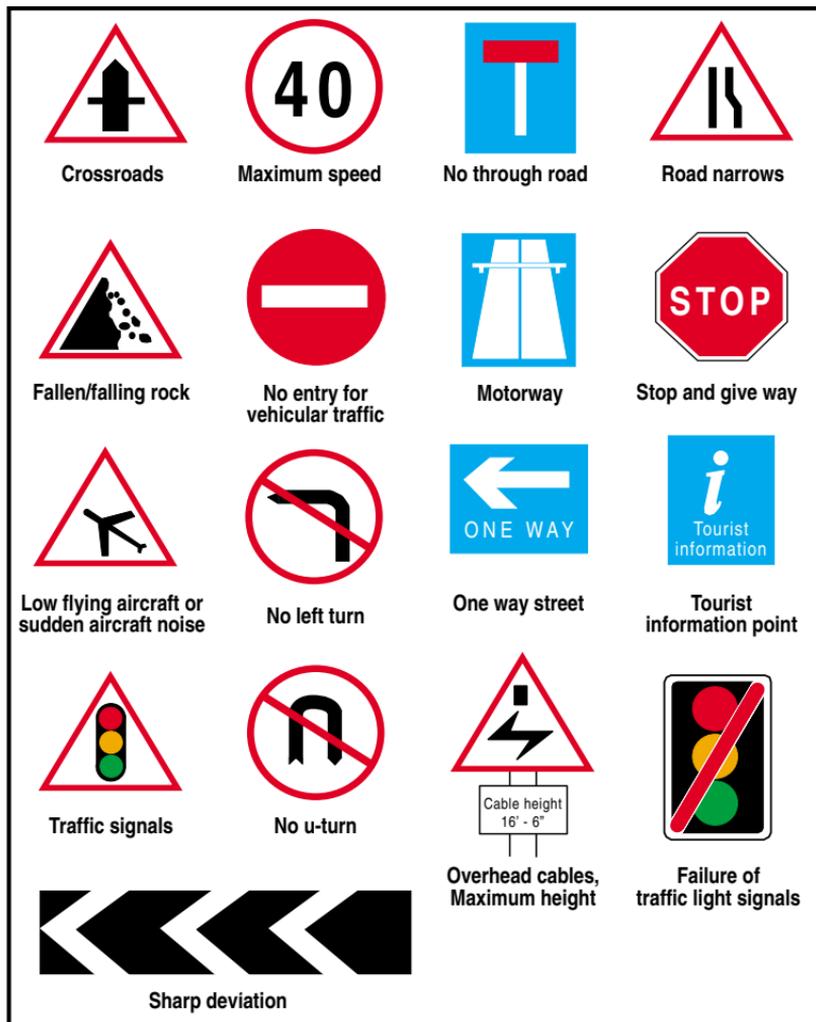
English

Latitude
Longitude
Machinegun
Map
Military
Mine
Mortar
Platoon
Radar
Reconnaissance
Rifle
Submarine
Tank
Tactics
Torpedo
Weapon
Weather

Bahasa Malay

lintang
bujur
mitraliur
peta
militer
ranjau
mortir
pleton
radar
mengintip
senapan
kapal selam
tank
taktik
menorpedo
senjata
cuaca

APPENDIX F: International Road Signs



APPENDIX G: Individual Protective Measures

Security Threats

Individual protective measures are the conscious actions which people take to guard themselves against physical harm. These measures can involve simple acts such as locking your car and avoiding areas where crime is rampant. When physical protection measures are combined they form a personal security program, the object of which is to make yourself a harder target. The following checklists contain basic individual protective measures that, if understood and followed, may significantly reduce your vulnerability to the security threats overseas (foreign intelligence, security services, and terrorist organizations). If you are detained or taken hostage, following the measures listed in these checklists may influence or improve your treatment.

Foreign Intelligence and Security Services

- Avoid any actions or activities that are illegal, improper, or indiscreet.
- Guard your conversation and keep sensitive papers in your custody at all times.
- Take it for granted that you are under surveillance by both technical and physical means, including:
 - ❑ Communications monitoring (telephone, telex, mail, and radio)
 - ❑ Photography
 - ❑ Search
 - ❑ Eavesdropping in hotels, offices, and apartments
- Do not discuss sensitive matters:
 - ❑ On the telephone
 - ❑ In your room
 - ❑ In a car, particularly in front of an assigned driver

- Do not leave sensitive personal or business papers:
 - ❑ In your room
 - ❑ In the hotel safe
 - ❑ In a locked suitcase or briefcase
 - ❑ In unattended cars, offices, trains, or planes
 - ❑ Open to photography from the ceiling
 - ❑ In wastebaskets as drafts or doodles
- Do not try to defeat surveillance by trying to slip away from followers or by trying to locate “bugs” in your room. These actions will only generate more interest in you. If you feel you are under surveillance, act as naturally as possible, go to a safe location (your office, hotel, U.S. Embassy), and contact your superior.
- Avoid offers of sexual companionship. They may lead to a room raid, photography, and blackmail. Prostitutes in many countries report to the police, work for a criminal organization, or are sympathetic to insurgent or terrorist organizations; in other words, are anti-U.S. Others may be employed by an intelligence service.
- Be suspicious of casual acquaintances and quick friendships with local citizens in intelligence/terrorist threat countries. In many countries, people tend to stay away from foreigners and do not readily or easily make contact. Many who actively seek out friendships with Americans may do so as a result of government orders or for personal gain.

In your personal contacts, follow these guidelines:

- Do not attempt to keep up with your hosts in social drinking.
- Do not engage in black market activity for money or goods.
- Do not sell your possessions.
- Do not bring in or purchase illegal drugs.
- Do not bring in pornography.

- Do not bring in religious literature for distribution. (You may bring one Bible, Koran, or other religious material for your own personal use.)
- Do not seek out religious or political dissidents.
- Do not take ashtrays, towels, menus, glasses, or other mementos from hotels or restaurants.
- Do not accept packages, letters, etc., from local citizens for delivery to the U.S.
- Do not make political comments or engage in political activity.
- Do not be lured into clandestine meetings with would-be informants or defectors.
- Be careful about taking pictures. In some countries it is unwise to take photographs of scenes that could be used to make unfavorable comparisons between U.S. and local standards of living or other cultural differences. Avoid taking any photographs from moving buses, trains, or aircraft.

The following picture subjects are clearly prohibited in most countries where an intelligence or terrorist/insurgent threat is evident:

- Police or military installations and personnel
- Bridges
- Fortifications
- Railroad facilities
- Tunnels
- Elevated trains
- Border areas
- Industrial complexes
- Port complexes
- Airports

Detention

Most intelligence and security services in threat countries detain persons for a wide range of real or imagined wrongs. The best advice, of course, is to do nothing that would give a foreign service the least reason to pick you up. If you are arrested or detained by host nation intelligence or security, however, remember the following:

- Always ask to contact the U.S. Embassy. You are entitled to do so under international diplomatic and consular agreements, to which most countries are signatories.
- Phrase your request appropriately. In Third World countries, making demands could lead to physical abuse.
- Do not admit to wrongdoing or sign anything. Part of the detention ritual in some threat countries is a written report you will be asked or told to sign. Decline to do so, and continue demanding to contact the Embassy or consulate.
- Do not agree to help your detainer. The foreign intelligence or security service may offer you the opportunity to help them in return for releasing you, foregoing prosecution, or not informing your employer or spouse of your indiscretion. If they will not take a simple no, delay a firm commitment by saying that you have to think it over.
- Report to your supervisor immediately. Once your supervisor is informed, the Embassy or consulate security officer needs to be informed. Depending on the circumstances and your status, the Embassy or consulate may have to provide you assistance in departing the country expeditiously.
- Report to your unit's security officer and your service's criminal investigative branch upon returning to the U.S. This is especially important if you were unable to report to the Embassy or consulate in country. Remember, you will not be able to outwit a foreign intelligence organization. Do not compound your error by betraying your country.

Foreign Terrorist Threat

Terrorism may seem like mindless violence committed without logic or purpose, but it is not. Terrorists attack soft and undefended targets, both people and facilities, to gain political objectives they see as out of reach by less violent means. Many of today's terrorists view no one as innocent. Thus, injury and loss of life are justified as acceptable means to gain the notoriety generated by a violent act in order to support their cause.

Because of their distinctive dress, speech patterns, and outgoing personalities, Americans are often highly visible and easily recognized when they are abroad. The obvious association of U.S. military personnel with their government enhances their potential media and political worth as casualties or hostages. Other U.S. citizens are also at risk, including political figures, police, intelligence personnel, and VIPs (such as businessmen and celebrities).

Therefore, you must develop a comprehensive personal security program to safeguard yourself while traveling abroad. An awareness of the threat and the practice of security procedures like those advocated in crime prevention programs are adequate precautions for the majority of people. While total protection is impossible, basic common sense precautions such as an awareness of any local threat, elimination of predictable travel and lifestyle routines, and security consciousness at your quarters or work locations significantly reduce the probability of success of terrorist attacks.

To realistically evaluate your individual security program, you must understand how terrorists select and identify their victims. Terrorists generally classify targets in terms of accessibility, vulnerability, and political worth (symbolic nature). These perceptions may not be based on the person's actual position, but rather the image of wealth or importance they represent to the public. For each potential target, a risk versus gain assessment is conducted to determine if a terrorist can victimize a target without ramifications to the terrorist organization. It is during this

phase that the terrorist determines if a target is “hard or soft.” A hard target is someone who is aware of the threat of terrorism and adjusts his personal habits accordingly. Soft targets are oblivious to the threat and their surroundings, making easy targets.

Identification by name is another targeting method gathered from aircraft manifests, unit/duty rosters, public documents (Who’s Who or the Social Register), personnel files, discarded mail, or personal papers in trash. Many targets are selected based upon their easily identifiable symbols or trademarks, such as uniforms, luggage (seabags or duffle bags), blatant national symbols (currency, tatoos, and clothing), and decals and bumper stickers.

Travel Security

Travel on temporary duty (TAD/TDY) abroad may require you to stay in commercial hotels. Being away from your home duty station requires increasing your security planning and awareness; this is especially important when choosing and checking into a hotel and during your residence there.

The recent experiences with airport bombings and airplane hijacking suggest some simple precautions:

- You should not travel on commercial aircraft outside the continental U.S. in uniform.
- Prior to traveling by commercial aircraft, you should screen your wallet and other personal items, removing any documents (that is, credit cards, club membership cards, etc.) which would reveal your military affiliation.

NOTE: Current USMC policy requires service members to wear two I.D. tags with metal necklaces when on official business. Also, the current I.D. card must be in possession at all times. These requirements include travel to or through terrorist areas. In view of these requirements, the service member must be prepared to remove and

conceal these and any other items which would identify them as military personnel in the event of a skyjacking.

- You should stay alert to any suspicious activity when traveling. Keep in mind that the less time spent in waiting areas and lobbies, the better. This means adjusting your schedule to reduce your wait at these locations.
- You should not discuss your military affiliation with anyone during your travels because it increases your chances of being singled out as a symbolic victim.
- In case of an incident, you should not confront a terrorist or present a threatening image. The lower profile you present, the less likely you will become a victim or bargaining chip for the terrorists, and your survivability increases.

Hostage Situation

The probability of anyone becoming a hostage is very remote. However, as a member of the Armed Forces, you should always consider yourself a potential hostage or terrorist victim and reflect this in planning your affairs, both personal and professional. You should have an up-to-date will, provide next of kin with an appropriate power-of-attorney, and take measures to ensure your dependents' financial security if necessary. Experience has shown that concern for the welfare of family members is a source of great stress to kidnap victims.

Do not be depressed if negotiation efforts appear to be taking a long time. Remember, chance of survival actually increases with time. The physical and psychological stress experienced while a hostage, could seem overpowering, but the key to your well-being is to approach captivity as a mission. Maintaining emotional control, alertness, and introducing order into each day of captivity will ensure your success and survival with honor.

During interaction with captors, maintaining self respect and dignity can be keys to retaining status as a human being in the captor's eyes. Com-

plying with instructions, avoiding provocative conversations (political, religious, etc.), and establishing a positive relationship will increase survivability. Being polite and freely discussing insignificant and nonessential matters can reinforce this relationship. Under no circumstance should classified information be divulged. If forced to present terrorist demands to the media, make it clear that the demands are those of the captor and that the plea is not made on your behalf. You must remember that you are an American service member; conduct yourself with dignity and honor while maintaining your bearing.

Hostages sometimes are killed during rescue attempts; consequently, you should take measures to protect yourself during such an action. Drop to the floor immediately, remain still and avoid any sudden movement; select a safe corner if it offers more security than the floor. Do not attempt to assist the rescuing forces but wait for instructions. After the rescue, do not make any comment to the media until you have been debriefed by appropriate U.S. authorities.

APPENDIX H:

Deployed Personnel's Guide to Health Maintenance

DoD-prescribed immunizations and medications, including birth control pills, should be brought in sufficient quantity for deployment's duration.

Only food, water, and ice from approved U.S. military sources should be consumed. Consuming food or water from unapproved sources may cause illness. Food should be thoroughly cooked and served hot.

Thorough hand-washing before eating and after using the latrine is highly recommended, as is regular bathing. Feet should be kept dry and treated with antifungal powder. Socks and underwear should be changed daily; underwear should fit loosely and be made of cotton fiber.

Excessive heat and sunlight exposure should be minimized. Maintaining hydration is important, as are following work-rest cycles and wearing uniforms properly. Sunglasses, sunscreen (SPF 15 or higher), and lip balm are recommended. Drinking alcohol should be avoided. Personnel with previous heat injuries should be closely monitored.

Uniforms should be worn properly (blouse boots). DEET should be applied to exposed skin and uniforms treated with permethrin; permethrin is not intended for use on skin. Proper treatment and wear of uniform, plus application of DEET to exposed skin, decreases the risk of diseases transmitted by biting insects.

Overcrowded living areas should be avoided. Ventilated living areas and avoiding coughing or sneezing toward others will reduce colds and other respiratory infections. Cots or sleeping bags should be arranged "head to toe" to avoid the face-to-face contact that spreads germs.

Contact with animals is not recommended. Animals should not be kept as mascots. Cats, dogs, and other animals can transmit disease. Food

should not be kept in living areas as it attracts rodents and insects, and trash should be disposed of properly.

Hazardous snakes, plants, spiders, and other insects and arthropods such as scorpions, centipedes, ants, bees, wasps, and flies should be avoided. Those bitten or stung should contact U.S. medical personnel.

All sexual contact should be avoided. Properly used condoms offer some protection from sexually transmitted diseases but not full protection.

Stress and fatigue can be minimized by maintaining physical fitness, staying informed, and sleeping when the mission and safety permits. Alcohol should be avoided as it causes dehydration, contributes to jet lag, can lead to depression, and decreases physical and mental readiness. Separation anxiety, continuous operations, changing conditions, and the observation of human suffering will intensify stress. Assistance from medical personnel or chaplains is available.

Additional Information

Water

If unapproved water, as found in many lakes, rivers, streams, and city water supplies must be used in an emergency, the water may be disinfected by:

- Adding calcium hypochlorite at 5.0 ppm for 30 minutes;
- Adding Chlor-Floc or iodine tablets according to label instructions;
- Heating water to a rolling boil for 5 to 10 minutes; or
- Adding 2 to 4 drops of ordinary chlorine bleach per quart of water and waiting 30 minutes before using it.

Either U.S. military preventive medicine or veterinary personnel should inspect bottled water supplies. Bottled water does not guarantee purity; direct sunlight on bottled water supplies may promote bacterial growth.

Water in canals, lakes, rivers, and streams is likely contaminated; unnecessary bathing, swimming, and wading should be avoided. If the tactical situation requires entering bodies of water, all exposed skin

should be covered to protect from parasites. Following exposure, it is important to dry vigorously and change clothing.

Rodents

Rodents should not be tolerated in the unit area; they can spread serious illness. Diseases may be contracted through rodent bites or scratches, transmitted by insects carried on rodents (such as fleas, ticks, or mites), or by contamination of food from rodent nesting or feeding. Personnel can minimize the risk of disease caused by rodents by:

- Maintaining a high state of sanitation throughout the unit area;
- Sealing openings 1/4 inch or greater to prevent rodents from entering unit areas;
- Avoiding inhalation of dust when cleaning previously unoccupied areas (mist these areas with water prior to sweeping; when possible, disinfect area using 3 ounces of liquid bleach per 1 gallon of water).
- Promptly removing dead rodents. Personnel should use disposable gloves or plastic bags over the hands when handling any dead animal and place the dead rodent/animal into a plastic bag prior to disposal.
- Seeking immediate attention if bitten or scratched by a rodent or if experiencing difficulty breathing or flu-like symptoms.

Insects

Exposure to harmful insects, ticks, and other pests is a year-round, worldwide risk. The following protective measures reduce the risk of insect and tick bites:

- Use DoD-approved insect repellents properly;
- Apply DEET on all exposed skin;
- Apply permethrin on clothing and bed nets;
- Tuck bed net under bedding; use bed net pole;
- Avoid exposure to living or dead animals;
- Regularly check for ticks;

- Discourage pests by disposing of trash properly; eliminate food storage in living areas; and
- Cover exposed skin by keeping sleeves rolled down when possible, especially during peak periods of mosquito biting (dusk and dawn); keep undershirts tucked into pants; tuck pant legs into boots.

Uniforms correctly treated with permethrin, using either the aerosol spray-can method (reapply after sixth laundering) or with the Individual Dynamic Absorption (IDA) impregnation kit (good for 6 months or the life of the uniform) will help minimize risks posed by insects. The date of treatment should be labeled on the uniform.

Bed nets should be treated with permethrin for protection against biting insects using either the single aerosol spray can method (treating two bed nets) or the unit's 2-gallon sprayer. All personnel should sleep under mosquito nets, regardless of time of day, ensure netting is tucked under bedding, and use poles to prevent bed nets from draping on the skin.

DoD-approved insect repellents are:

IDA KIT: NSN 6840-01-345-0237

Permethrin Aerosol Spray: NSN 6840-01-278-1336

DEET Insect Repellent: NSN 6840-01-284-3982

Hot Weather

If heat is a threat in the area, personnel should:

- Stay hydrated by drinking water frequently;
- Follow work-rest cycles;
- Monitor others who may have heat-related problems;
- Wear uniforms properly;
- Use a sun block (SPF 15 or higher), sunglasses, and lip balm;
- During hot weather, wear natural fiber clothing (such as cotton) next to the skin for increased ventilation;
- Seek immediate medical attention for heat injuries such as cramps, exhaustion, or stroke. Heat injuries can also occur in cold weather;

- Avoid standing in direct sunlight for long periods; be prepared for sudden drops in temperature at night, and construct wind screens if necessary to avoid blowing dust or sand.

Sunscreens:

Sunscreen lotion: NSN 6505-01-121-2336

Non-alcohol lotion base sunscreen: NSN 6505-01-267-1486

Work/Rest Table

Heat Cat	WBGT Index (° F)	EASY WORK		MODERATE WORK		HARD WORK	
		Work / Rest	Water Intake (Qt/Hr)	Work / Rest	Water Intake (Qt/Hr)	Work / Rest	Water Intake (Qt/Hr)
1	78 – 81.9	NL	1/2	NL	3/4	40/20 min	3/4
2	82 – 84.9	NL	1/2	50/10 min	3/4	30/30 min	1
3	85 – 87.9	NL	3/4	40/20 min	3/4	30/30 min	1
4	88 – 89.9	NL	3/4	30/30 min	3/4	20/40 min	1
5	> 90	50/10 min	1	20/40 min	1	10/50 min	1

The work/rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hours of work in the specific heat category. Individual water needs will vary +/- (plus/minus) 1/4 qt/hr.

NL = no limit to work time per hour. Rest means minimal physical activity (sitting or standing) and should be accomplished in shade if possible.

Caution: Hourly fluid intake should not exceed 1 ½ quarts. Daily fluid intake should not exceed 12 quarts. Note: MOPP gear adds 10⁰ to WBGT Index.

Food

High risk food items such as fresh eggs, unpasteurized dairy products, lettuce or other uncooked vegetables, and raw or undercooked meats should be avoided unless they are from U.S. military approved sources. Those who must consume unapproved foods should choose low risk

foods such as bread and other baked goods, fruits that have thick peels (washed with safe water), and boiled foods such as rice and vegetables.

Human Waste

Military-approved latrines should be used when possible. If no latrines are available, personnel should bury all human waste in pits or trenches.

Cold Weather

If cold weather injuries are a threat in the area, personnel should:

- Drink plenty of fluids, preferably water or other decaffeinated beverages;
- Closely monitor others who have had previous cold injuries;
- Use well-ventilated warming tents and hot liquids for relief from the cold. Watch for shivering and increase rations to the equivalent of four MREs per day;
- Not rest or sleep in tents or vehicles unless well ventilated; temperatures can drop drastically at night;

WIND SPEED		COOLING POWER OF WIND EXPRESSED AS "EQUIVALENT CHILL TEMPERATURE"																								
KNOTS	MPH	TEMPERATURE (°F)																								
CALM	CALM	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60				
		EQUIVALENT CHILL TEMPERATURE																								
3-6	5	36	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-70				
7-10	10	30	25	18	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-65	-70	-80	-90			
11-15	15	25	18	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-65	-70	-80	-90	-100	-120	-140	
16-19	20	20	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-65	-70	-75	-80	-90	-100	-110	-120	-130
20-23	25	15	10	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-65	-70	-75	-80	-90	-100	-110	-120	-130	-140
24-28	30	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-65	-70	-75	-80	-90	-100	-110	-120	-130	-140
26-32	35	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-65	-70	-75	-80	-90	-100	-110	-120	-130	-140	-150
30-36	40	0	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-65	-70	-75	-80	-90	-100	-110	-120	-130	-140	-150
Winds Above 40 MPH Have Little Additional Effect		LITTLE DANGER				INCREASING DANGER Flesh may freeze within 1 minute						GREAT DANGER Flesh may freeze within 30 seconds														

- Dress in layers, wear polypropylene long underwear, and use sunglasses, scarf, unscented lip balm, sunscreen, and skin moisturizers;
- Insulate themselves from the ground with tree boughs or sleeping mats and construct windscreens to avoid unnecessary heat loss; and
- Remember that loss of sensitivity in any body part requires immediate medical attention.

First Aid

Basic Lifesaving

Those caring for injured persons should immediately:

- Establish an open airway,
- Ensure the victim is breathing,
- Stop bleeding to support circulation,
- Prevent further disability,
- Place dressing over open wounds,
- Immobilize neck injuries,
- Splint obvious limb deformities, and
- Minimize further exposure to adverse weather.

Injuries and Care

Shock

- Symptoms:
 - Confusion
 - Cold, clammy skin
 - Sweating
 - Shallow, labored, and rapid breathing
 - Rapid pulse
- Treatment:
 - An open airway should be maintained.
 - Unconscious victims should be placed on their side.

- Victims should be kept calm, warm, and comfortable.
- Lower extremities should be elevated.
- Medical attention should be sought as soon as possible.

Abdominal Wound

■ Treatment:

- Exposed organs should be covered with moist, clean dressing.
- Wound should be secured with bandages.
- Organs that have been displaced should never be reintroduced to the body.

Bleeding

■ Treatment:

- Direct pressure with hand should be applied; a dressing should be used if available.
- Injured extremity should be elevated if no fractures are suspected.
- Pressure points may be used to control bleeding.
- Dressings should not be removed; additional dressings may be applied over old dressings.

■ Tourniquet:

- NOTE: Tourniquets should only be used when an injury is life threatening.**
- A 1-inch band should be tied between the injury and the heart, 2 to 4 inches from the injury, to stop severe bleeding; wire or shoe strings should not be used.
- Band should be tight enough to stop bleeding and no tighter.
- Once the tourniquet is tied, it should not be loosened.
- The tourniquet should be left exposed for quick visual reference.
- The time that the tourniquet is tied and the letter “T” should be written on the casualty’s forehead.

Eye Injury

Treatment:

- Embedded objects should not be removed; dressings should secure objects to prohibit movement.
- Bandages should be applied lightly to both eyes.
- Patients should be continuously attended.

Chest Wound

Symptoms:

- Sucking noise from chest
- Frothy red blood from wound

Treatment:

- Entry and exit wounds should be identified; wounds should be covered (aluminum foil, ID card).
- Three sides of the material covering the wound should be taped, leaving the bottom untaped.
- Victim should be positioned to facilitate easiest breathing.

Fractures

Symptoms:

- Deformity, bruising
- Tenderness
- Swelling and discoloration

Treatment:

- Fractured limb should not be straightened.
- Injury should be splinted with minimal movement of injured person.
- Joints above and below the injury should be splinted.
- If not in a chemical environment, clothing should be removed from injured area.

- Rings should be removed from fingers.
- Pulse should be checked below injury to determine blood flow restrictions.

Spinal, Neck, Head Injury

Symptom:

- Lack of feeling and/or control below neck

Treatment:

- Conscious victims should be cautioned to remain still.
- Airway should be checked without moving injured person's head.
- Victims who must be moved should be placed, without bending or rotating victim's head and neck, on a hard surface that would act as a litter (door, cut lumber).
- Head and neck should be immobilized.

Heat Injuries

Heat Cramps: Symptoms

- Spasms, usually in muscles or arms
- Results from strenuous work or exercise
- Loss of salt in the body
- Normal body temperature

Heat Exhaustion: Symptoms

- Cramps in abdomen or limbs
- Pale skin
- Dizziness, faintness, weakness
- Nausea or vomiting
- Profuse sweating or moist, cool skin
- Weak pulse
- Normal body temperature

Heat Stroke: Symptoms

- Headache
- Dizziness
- Red face/skin
- Hot, dry skin (no sweating)
- Strong, rapid pulse
- High body temperature (hot to touch)

Treatment:

- Victim should be treated for shock.
- Victim should be laid in a cool area with clothing loosened.
- Victim can be cooled by sprinkling with cool water or fanning (though not to the point of shivering).
- If conscious, victim may drink cool water (2 teaspoons of salt to one canteen may be added).
- Medical attention should be sought immediately; heat stroke can result in death.

Burns

Burns may be caused by heat (thermal), electricity, chemicals, or radiation. Treatment is based on depth, size, and severity (termed degree of burn). All burn victims should be treated for shock and seen by medical personnel.

Thermal/First Degree: Symptoms

- Skin reddens
- Painful

Treatment:

- Source of burn should be removed.
- Cool water should be applied to the affected area.

Thermal/Second Degree: Symptoms

- Skin reddens and blisters
- Very painful

Treatment:

- Source of burn should be removed.
- Cool water should be applied to the affected area.
- Blisters should not be broken.
- A dry dressing should cover the affected area.

Thermal/Third Degree: Symptoms

- Charred or whitish looking skin
- May burn to the bone
- Burned area not painful; surrounding area very painful

Treatment:

- Source of burn should be removed.
- Clothing that adheres to burned area should not be removed.
- A dry dressing should cover the affected area.

Electrical Burns

Treatment:

- Power source must be off.
- Entry and exit wounds should be identified.
- Burned area should be treated in accordance with its severity.

Chemical Burns

Treatment:

- Skin should be flushed with a large amount of water; eyes should be flushed for at least 20 minutes.

- Visible contaminants should be removed.
- Phosphorus burns should be covered with a wet dressing (prevents air from activating the phosphorous)

Cold Injuries

Hypothermia: Symptoms

- Body is cold under clothing
- Victim may appear confused or dead

Treatment:

- Victim should be moved to a warm place.
- Wet clothing should be removed; victim should be dressed in warm clothing or wrapped in a dry blanket.
- Body parts should not be rubbed.
- Victims must not consume alcoholic beverages.

Frostbite: Symptoms

- Skin appears white or waxy
- Skin is hard to the touch

Treatment:

- Victim should be moved to a warm place.
- Affected area should be warmed in 104 to 108° F (40° C) water for 15 to 30 minutes (NOT hot water).
- Affected area should be covered with several layers of clothing.
- Affected area must not be rubbed.
- Victim must seek medical attention.

Emergency Life-Saving Equipment

Equipment may be improvised when necessary. Following is a list of possible uses for commonly found items.

Shirts = Dressings/Bandages

Belts, Ties = Tourniquets, Bandages

Towels, Sheets = Dressings/Bandages

Socks, Panty Hose, Flight cap = Dressings/Bandages

Sticks or Tree Limbs = Splints

Blankets = Litters, Splints

Field Jackets = Litters

BDU Shirts = Litters/Splints

Ponchos = Litters/Bandages

Rifle Sling = Bandages

M-16 Heat Guards = Splints

APPENDIX I: Dangerous Animals and Plants

Dangerous Snakes

Red-necked Keelback

Photo not available.

Description:

Adult length usually 0.6 to 0.7 meters. Background color olive, greenish gray, or greenish brown with indistinct flecks of black and yellow which may appear as a mid-dorsal stripe. Neck and forepart of body vivid red; sides of head yellow, with subocular black streak.

Habitat:

Brush-covered or grassy fields adjacent to streams, ditches, and paddies.

Activity and behavioral patterns:

Primarily diurnal and terrestrial. When threatened, rears forepart of body and spreads hood.

Venom characteristics:

Primarily hemotoxic. Bite may be painless with minimal local swelling. Symptoms may include headache, nausea, and vomiting.

Malayan Krait

Photo not available.

Description:

Adult length usually 1.2 to 1.4 meters. Background color black with white or yellowish crossbands speckled with black on body and tail; belly pure white. Head not distinct from neck. Tail ends in a sharp tip.

Habitat:

Common in lowland forests and moist areas.

Activity and behavioral patterns:

Nocturnal and very timid. Active at dusk. Inoffensive; will not bite unless stepped on. Often found near inhabited places and on trails at night.

Venom characteristics:

Potent neurotoxin. Most victims bitten while asleep in huts at night. Local symptoms generally minimal. Symptoms may include abdominal discomfort, headache, and giddiness. Neurotoxic symptoms include ptosis (drooping of the upper eyelid), facial paralysis, and inability to open mouth, swallow, or protrude tongue. Fatalities reported.

Banded Krait

Photo not available.

Description:

Adult length usually 1.0 to 1.2 meters; maximum of 2.0 meters. Background color is pattern of alternating light and dark bands encircling body. Light bands pale to bright canary yellow; dark bands generally black and wider. Distinctive black spear-shaped mark beginning between eyes and extending back along neck. Prominent dorsal ridge down back and tail gives thin, emaciated appearance. Tail blunt or slightly bulbous at tip.

Habitat:

Most common in grassy fields, meadows, and cultivated areas, often adjacent to streams, rivers, and lakes. Found at elevations up to 1,500 meters.

Activity and behavioral patterns:

Normally nocturnal and very timid; may prowl during day during and after rains. Inoffensive and secretive. Hides head beneath body if molested; may twitch or writhe spasmodically but seldom attempts to bite even when aggravated.

Venom characteristics:

Potent neurotoxin. Minimal local pain, redness, or edema. Systemic symptoms develop slowly; include general achiness, paralysis, shock, and respiratory failure. Fatalities recorded.

Red- or Yellow-headed Krait

Photo not available.

Description:

Adult length usually 1.0 to 1.2 meters; maximum of 1.6 meters. Background color blue-black above and below, with or without yellow vertebral line; head red or yellow; tail and sometimes posterior part of body orange-red. Head not distinct from neck.

Habitat:

Forest and jungle, primarily in hilly or mountainous areas.

Activity and behavioral patterns:

Nocturnal and terrestrial. Slow moving. When provoked, raises head and wags tail slowly. Rarely seen.

Venom characteristics:

Little known of venom; likely neurotoxic. Few bites recorded.

Coral Snakes

Photo not available.

Description:

Adult length usually 0.3 to 0.5 meters; maximum of 1.0 meter. Diameter about size of finger. Background color variable — either russet to pink, with narrow, widely separated black crossbands and wide cream band across base of head; or brown to crimson, with three longitudinal black stripes from head to tail and a narrow cream headband. Head small, barely distinct from neck.

Habitat:

Scrub jungles and monsoon forests. Often found near human habitations. Generally avoids dry terrain.

Activity and behavioral patterns:

Generally nocturnal, remaining hidden during day within humus of forest floor, or beneath logs, stones, and other debris in wooded areas. Occasionally active in early morning.

Venom characteristics:

Likely neurotoxic. Little known of venom. Few bites recorded. One case of fatal envenoming reported from Nepal. No specific antivenin produced.

Blue Long-glanded Coral Snake

Photo not available.

Description:

Adult length usually 0.6 to 0.9 meters; maximum of about 1.5 meters; relatively slender. Background color dark blue-black above with white or pale blue lateral lines. Head, entire belly, and tail bright red. Head small, not distinct from body.

Habitat:

Tropical and mountain area rain forests, especially near streams. Not generally found in open or dry areas.

Activity and behavioral patterns:

Terrestrial and nocturnal. Slow moving. When disturbed, may squirm violently; in defense, raises and coils tail, revealing red ventral surface.

Venom characteristics:

Little known of venom; likely neurotoxic. Fatalities reported.

Banded Long-glanded Coral Snake

Photo not available.

Description:

Adult length usually 0.3 meters; maximum of about 0.5 meters. Background brown to black above, generally with longitudinal black, yellow, and whitish lines; belly alternately barred black and white. Tail red above and below.

Habitat:

Common in forested areas up to elevations of 1,100 meters.

Activity and behavioral patterns:

Secretive; hides under logs and beneath vegetable litter. When molested, makes no attempt to escape; in defense, raises tail to display brightly colored ventral surface, and writhes and tumbles about.

Venom characteristics:

Little known of venom; likely neurotoxic. Cases of envenomation reported. No specific antivenin produced.

Monocellate Cobra

Photo not available.

Description:

Adult length may exceed 1.5 meters; relatively slender. Color and pattern varies widely. Background color yellow, yellow-tan, brown, greenish brown, olive, or black; may show alternate wide and narrow transverse dark bands. Dorsal aspect of hood commonly with white annular marking, with black center and rim; resembles an "eye". May have transverse band with central "eye", or lack marking altogether. Ventral surface of neck paler or yellowish with broad, dark band.

Habitat:

Occurs in virtually all habitats except dense forests; frequently occurs in cities and villages. Most common cobra in much of Southeast Asia.

Activity and behavioral patterns:

Most active at twilight, but may bask in sun during day. Shelters in areas such as rock piles, termite mounds, fallen logs, mammal burrows, and building foundations. Does not "spit" venom at aggressor.

Venom characteristics:

Potent neurotoxin and cytotoxin. Pain and swelling often followed by blistering and extensive necrosis. Neurotoxic symptoms may include ptosis, drowsiness, dysphagia (difficulty in swallowing), dysphonia (difficulty in speaking), and generalized weakness. High mortality rate following envenomation.

Sumatran Spitting Cobra

Photo not available.

Description:

Adult length about 1.5 meters. Background color variable. In some areas, color usually uniform yellow or yellowish green; elsewhere, color uniform jet black with bluish-black belly and pale markings on neck and chin.

Habitat:

Tolerates variety of habitats. Common in open plains, jungles, and areas populated by man.

Activity and behavioral patterns:

Generally nocturnal. Timid; seeks to escape when encountered. When cornered, rears up and spreads hood; bites as last resort. Most dangerous when surprised in close quarters. When biting, tends to hold on and chew savagely. Highly developed ability to "spit" venom at intruders; can spit venom several feet.

Venom characteristics:

Potent neurotoxin. Local symptoms include pain, swelling, and necrosis. If venom enters eyes, may cause immediate burning pain with inflammation and permanent blindness.

King Cobra

Photo not available.

Description:

World's largest venomous snake. Adult length usually 3.0 to 4.0 meters; maximum of about 5.5 meters. Background color olive, brown or greenish-yellow; becoming darker on tail. Head scales edged with black. Throat yellow or orange, sometimes with dark markings.

Habitat:

Open country, cultivated areas, dense or open forests, bamboo thickets, dense mangrove swamps, and hilly jungles. Often found near streams. Range extends from sea level up to 1,800 meters elevation. Species widespread but uncommon.

Activity and behavioral patterns:

Diurnal and very active. Primarily terrestrial, but sometimes found in trees and water. Constructs elaborate nest of dead leaves and other decaying vegetation. Unlikely to attack unless provoked. When confronted, expands hood and may rise as high as 1.8 meters. When angry, gives deep resonant hiss similar to growl of small dog. Reports of aggressiveness and unprovoked attacks likely untrue.

Venom characteristics:

Potent neurotoxin. Severe local pain and tenderness almost immediately following bite. Bites uncommon, but usually severe and may be rapidly fatal.

Malayan Pit Viper

Photo not available.

Description:

Adult length usually 0.6 to 0.8 meters; maximum of 1.0 meters. Background color gray, pale brown, or pale reddish brown. Dorsal pattern of alternating dark, triangular markings with apices toward vertebral line and series of dark spots on flanks. Belly pale with darker mottling. Relatively short, thick-set snake with flattened body and large triangular-shaped head; pointed and slightly upturned snout. Well-defined dark postocular patch, sometimes with white edge above and below.

Habitat:

Coastal forests; bamboo thickets; overgrown, unused farmland; forest adjacent to plantations. Generally inhabit lowlands, but also found in mountains to almost 2,000 meters elevation.

Activity and behavioral patterns:

Mainly nocturnal but sometimes diurnal. Terrestrial. Highly aggressive; bad tempered and quick to strike if disturbed. Shelter in piles of litter, beneath and within fallen logs, or in clumps of grass or bamboo.

Venom characteristics:

Potent hemotoxin. Local swelling may begin within minutes after the bite, followed by blistering and necrosis. Hemoptysis (expectoration of blood from lungs), apathy, thirst, rapid thready pulse, and decreased

blood pressure may occur. Bites fairly common. Case fatality rate low, but deaths have been attributed to cerebrovascular accidents, shock, tetanus, septicemia, and anaphylaxis (hypersensitivity to foreign substance).

Mountain Pit Viper

Photo not available.

Description:

Adult length about 0.6 to 0.8 meters; maximum of 1.1 meters. Relatively thick-set snake. Background color light olive, reddish, or orange-brown; one or two dorsal rows of squarish patches meeting or alternating at vertebral line. Belly pale, spotted with brown. Dark brown or black triangular head, distinct from neck.

Habitat:

Inhabits mountains or plateaus from coastal lowlands up to more than 2,000 meters elevation. Found in tea fields, cultivated areas, under shrubs, and among vegetation. Often found near human habitation and sometimes in homes.

Activity and behavioral patterns:

Semiarboreal, but commonly found on forest floor near streams. Slug-gish disposition, but ready to bite when irritated.

Venom characteristics:

Hemotoxic. Reported symptoms include severe local bleeding and swelling, thrombocytopenia (abnormal decrease in number of blood platelets), and coagulopathy. No specific antivenin produced.

White-lipped Green Pit Viper

Photo not available.

Description:

Adult length about 0.4 to 0.6 meters; maximum of 0.9 meters. Relatively long, thin snake with triangular-shaped head, very distinct from neck. Background color uniformly green, varying from yellowish green to bright grass green. May have darker crossbands on scales and interstitial skin. Belly pale yellowish white to dark green. Upper lip white or

pale green. Entire side of head, below eye, white, pale yellow, or light green. Dorsal surface of tail reddish brown.

Habitat:

Prefers open country at low elevations. Frequently found around human habitations and in gardens.

Activity and behavioral patterns:

Mainly nocturnal and arboreal; rarely seen on ground except after dark. Relatively slow moving and inoffensive, except when thoroughly annoyed. However, when defending itself, strikes and bites vigorously.

Venom characteristics:

Primarily hemotoxic. Symptoms may include local pain, swelling, bruising, and tender enlargement of local lymph nodes. Systemic symptoms may include nausea, vomiting, diarrhea, abdominal pain, lethargy, gastrointestinal bleeding, and hematuria. Bites common. Fatalities recorded.

Pope's Pit Viper

Photo not available.

Description:

Maximum length up to 1.0 meter. Background color uniform green above; lighter green or yellow below. May have indistinct white or yellow stripe on each side near abdomen. Tip of tail usually reddish brown. Distinctive triangular head and pointed snout.

Habitat:

Most abundant in hilly and mountainous country from 900 to more than 1,500 meters elevation. Common on tea plantations.

Activity and behavioral patterns:

Arboreal and largely nocturnal. Generally not aggressive; often permits human intruder to approach closely without striking. When aroused, threatens with open mouth and strikes vigorously and quickly.

Venom characteristics:

Likely hemotoxic. Little data available. No reliable reports of bites. No specific antivenin produced.

Flat-nosed Pit Viper

Photo not available.

Description:

Maximum length of about 1.0 meters. Background color lighter brown with darker markings. Light, dark-edged streak behind each eye. Tail and belly mottled brown; darker than upper surface. Flattened, slightly upturned snout.

Habitat:

Lowland forest.

Activity and behavioral patterns:

Strictly arboreal; found as high as 20 meters above ground. Very sluggish. Rarely seen.

Venom characteristics:

Hemotoxic. Few bites reported. Reported symptoms include immediate burning pain and swelling. No specific antivenin produced.

Mangrove Pit Viper

Photo not available.

Description:

Maximum length usually 0.7 to 0.8 meters; may exceed 1.0 meter. Background purplish brown or yellowish brown; may have white line along each side of body. May have series of large brownish saddle-shaped markings with small spots on flanks. Belly whitish.

Habitat:

Widely disturbed along coastal regions in mangrove and swampy forests. Occurs most often on offshore islands, but may be found in inland bamboo jungles up to 600 meters elevation.

Activity and behavioral patterns:

Primarily terrestrial, but commonly encountered in low bushes. Very aggressive.

Venom characteristics:

Potent hemotoxin. Envenoming may cause severe pain, local swelling involving entire bitten limb, tender enlargement of local lymph nodes, local necrosis, and incoagulable blood. Bites common. Deaths reported. No specific antivenin produced.

Sumatran Pit Viper

Photo not available.

Description:

Maximum length about 1.6 meters; relatively slender snake. Background color bright green with dark crossbands; row of pale brownish or pinkish spots on both sides of vertebral line. White line along sides of body. Tail green with brown spots; wholly brown in posterior half. Belly yellowish green. Pale postocular streak.

Habitat:

The lowland forests and cocoa and pepper plantations adjacent to fringes of forest.

Activity and behavioral patterns:

Largely nocturnal and arboreal. Very aggressive. Will strike at slightest movement.

Venom characteristics:

Hemotoxic. Little known of venom; bites followed by very severe pain and swelling. No specific antivenin produced.

Temple Pit Viper

Photo not available.

Alternate Name:

Wagler's pit viper

Description:

Adult length usually 1.0 to 1.3 meters; relatively thick-set snake. Background color green or blue-green. Each scale with black edging. Series of narrow transverse bright yellow or greenish yellow stripes. Dispro-

portionately large head. Top of head black with yellow-green markings. Yellow-green postocular streak edged above with black; labials and china yellow.

Habitat:

Lowland forests, in low shrubs and bushes, and small trees, at elevations up to 600 meters.

Activity and behavioral patterns:

Arboreal and primarily nocturnal. Sluggish and docile during day. Rarely strikes even when severely threatened.

Venom characteristics:

Hemotoxic. Symptoms may include immediate bleeding, pain, and swelling at site of bite. No deaths recorded. No specific antivenin produced.

Arthropods

Scorpions

Although scorpions are capable of inflicting a painful sting, none of them known to be life-threatening.

Spiders

Although several species of spiders, including some very large and physically imposing tarantulas capable of inflicting a painful bite occur, none of them are known to be life-threatening:

Insects

Rove beetles are small (usually 4 to 7 millimeters) and slender and do not look like typical beetles; they have very short wing covers that expose most of their very flexible abdomen. When crushed, their body fluid contains a contact vesicant that will blister skin. The lesions take about a week to heal and the area remains painful for two weeks. The vesicant is extremely irritating if it gets into the eyes; temporary blindness has been reported.

Centipedes

Although centipedes capable of inflicting a painful bite exist, none of them are known to be life-threatening.

Millipedes

Millipedes do not bite and in general are harmless to humans. However, when handled, some larger millipedes (may be more than 50 millimeters long) secrete a very noxious fluid that can cause severe blistering upon contact with tender skin; a few are capable of squirting this fluid a distance of at least 2 feet.

Plants

Rosary Pea

Other Name(s):

Precatory bean, jequiritia bean, coral pea, crab's eyes, lucky beans, Pater-noster beans.

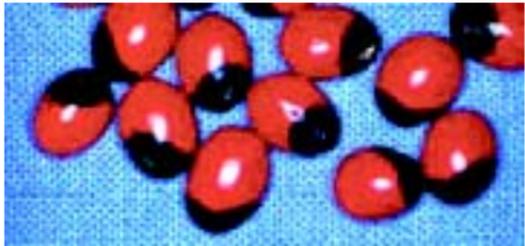
Mechanism(s) of toxicity/injury:

Can kill. The unchewed seeds are impervious and will pass through the GI tract without harm. Seeds are attractive and frequently used to make rosaries, necklaces, etc. Poison can be absorbed through breaks in the skin if integrity of the hull is compromised; for example, while stringing beads for a necklace. Onset of toxicity usually in one to three days.

The rosary pea is documented to have a quickly fatal potential (neurotoxin and hemocoagulant), having killed a child who thoroughly chewed one seed. Dermatitis may also occur from wearing a necklace of stringed beads.

Comments:

The genus includes 17 species of slender, twining vines with a woody base supported by other plants or a fence. Fruit is a dehiscent (opens to



expose seeds/fruit at maturity) pod; inside the pod are three to five glossy, red and black seeds (used by many as ornaments). Note: *Abrus* spp. seeds are black at the site of attachment (hilum) and are easily confused with the much less toxic Mexican *Rhynchosia* spp. (piule). The colors are reversed in piule seeds. Symptoms of toxicity include nausea and vomiting with abdominal pains, bloody diarrhea, fever, shock, coma. Used in South America and Africa in folk medicine.

Modikka

Photo not available.

Mechanism(s) of toxicity/injury:

The root is reported to contain prussic acid and a cyanogenic glycoside, which is destroyed by drying. Also contains a toxalbumin called modecin, a protein-synthesis inhibitor similar in toxicity to ricin, the main etiology for the gastroenteritis syndrome (may be severe). The usual poisoning scenario is that of the root being mistaken for an edible tuber, especially in situations of scarce food. Death has occurred after ingestion of the fruit. Symptoms within one day are mainly due to the hydrocyanic acid; the toxalbumin results in illness a few days later. *Modikka* used in India as a “worming” medicine; sap is very irritating. Has been used in Africa to murder.

Comments:

Herbs. Some species have been used in Africa as medicinals (e.g., for malaria, leprosy).

Ammania

No picture available.

Alternate Name:

Blistering ammania

Mechanism(s) of toxicity/injury:

Found mostly in wet places; has extremely acrid sap that produces intense pain and blistering on contact with skin.

Comments:

Do not confuse with loostrate plants in the primrose family.

Tung Nut**Alternate Name:**

Tung oil tree; candlenut, varnish tree; lumbang nut, banucalad.

Mechanism(s) of toxicity/injury:

Contains a milky latex. The brown drupe has a seed containing a phytotoxin and an irritating ester (a saponin that causes dermatitis). Several episodes are on record of tung oil (derived from several species of the genus) mistakenly used as cooking oil resulting in vomiting and diarrhea in those ingesting food



cooked with it. The oil will cause severe contact dermatitis with vesicles and bullae; blindness has resulted from exposure of the eyes to the oil.

Comments:

The tree is widely cultivated for commercial use (the oil is used as a wood preservative).

Fish Berry

Photo not available.

Alternate Name:

Indian berry

Mechanism(s) of toxicity/injury:

Fruit are highly poisonous. Used as a fish poison (the flesh of the fish may also become toxic) and in an ointment to kill lice (dangerous). Malaysian

natives use it in arrow poison. Has been used in India as an adulterant to beer to increase the power of intoxication. Has resulted in deaths.

Comments:

One species: a woody climber native to Indomalaysia.

Mexican Poppy

Alternate Name:

Prickly pear, argemoney

Mechanism(s) of toxicity/injury:

The entire plant contains alkaloids (can be transmitted through milk). Has caused "epidemic dropsy" (vomiting, diarrhea, glaucoma, abdominal swelling) in India through the seeds contaminating home-grown grains. Prickles cause irritation of the skin.



Comments:

Found in arid areas.

Freshwater Mangrove

Photo not available.

Alternate Name:

Putat, bitung, laut

Mechanism(s) of toxicity/injury:

Saponins and hydrocyanide have been isolated from fruit and seeds. Used as fish poisons in many Pacific islands. Fruit contains a saponin, and the seeds induce vomiting and have been shown to induce hypoglycemia (low blood sugar) in rodents.

Comments:

Large tree found growing along shorelines; have large (20-38 cm long, 10-15 cm wide) non-toothed leaves, white to pink flowers (on individual

stalks; square in cross section), and one-seeded fruits (9-13 cm long; square in cross-section). Seeds are crushed and used as fish poison by Australian troops and aborigines.

Indian Laurel

Other Name(s):

Mastwood, domba oil, pinnay oil

Mechanism(s) of toxicity/injury:

Cream-colored, resinous sap irritating to the skin and eyes; globose fruit contains one large poisonous seed. Sap is toxic. Leaves contain cyanide.



Comments:

Erect, dense, low-branched tree having leathery smooth leaves (to 15 cm) and white flowers with four petals. Native to tropical Asia — originally from India (a common shade tree in Malaysia) and the Pacific islands. Seeds dispersed by bats and the sea.

Milkweed

Other Name(s):

Crown flower

Mechanism(s) of toxicity/injury:

Sap with extremely irritating effect on the eyes; also causes an allergic type contact vesicant skin reaction.



Comments:

Poisonings have resulted in death.

Shansi

Photo not available.

Mechanism(s) of toxicity/injury:

Contains a number of alkaloids. Hallucinogenic effects. Has caused death.

Comments:

This is a group of deciduous shrubs or small trees with red, yellow, or purple/black berry-like fruit. Has five one-seeded nutlets. Bark used for tanning, crushed fruit as a fly poison. Used in folk remedies.

Manghas

Photo not available.

Mechanism(s) of toxicity/injury:

The seed contains irritant toxins and cardiac glycosides that result in severe purging, even death, if eaten.

Comments:

Has a milky sap, formerly used as ordeal poisons and for suicide; also used as a fish poison. Green fruit used in India to kill dogs.

Bulb Yam

Photo not available

Other Name(s):

Air potato

Mechanism(s) of toxicity/injury:

Bulb yam, air potato and wild yam have tubers that are poisonous when eaten raw. Causes gastroenteritis (nausea, bloody diarrhea). Some eat them after special preparation. Another species is a prickly climber with a cluster of tubers just below the soil surface. Considered the chief “famine food” of the tropical East. Poisonous unless properly prepared. Has been used to commit murder. Found mainly in the lowlands.

Comments:

Other species of this genus are good to eat with no special preparation (goa yam, buck yam).

Rattlepod**Other Name(s):**

Rattlebox, rattleweed; chillagoe, horse poison.

Mechanism(s) of toxicity/injury:

Contain pyrrolizidine alkaloids (monocrotaline, heliotrine, retrorsine); can kill. Low-level ingestions can cause lung damage; high levels will damage the liver. Some species have caused toxicity through the contamination of flour or when incorporated in teas.

**Comments:**

The fruits are inflated dehiscent legumes (pods) with parchment-like walls; the ripe seeds come loose within the pods and rattle when shaken. The flowers are pea-like. Found in open woods, roadsides, margins, sandy soils and fields.

Milky Mangrove

Photo not available.

Other Name(s):

Blinding tree, sinugaga; blind-your-eye, scrub poison tree.

Mechanism(s) of toxicity/injury:

Extremely acrid sap that has caused damage to the eyes, mucous membranes, and skin of those who were chopping or sawing the wood.

Comments:

Small evergreen trees up to 45 feet tall with shiny green, leathery leaves and greenish flowers in narrow spikes; native to Indomalaysian, Pacific Islands, and Australia; contains copious milky sap.

Croton**Other Name(s):**

Ciega-vista; purging croton.

Mechanism(s) of toxicity/injury:

Long-lasting vesicular dermatitis results from contact with the toxic resin. The cathartic and purgative properties of the toxins

(croton oil, a "phorbol," in leaves, stems, and seeds) causes severe gastroenteritis, even death; 20 drops potentially lethal (the oil applied externally will blister the skin). Many members covered with hundreds of sticky hairs that cling to the skin if contacted. Contact with the eyes can be very serious.

**Comments:**

Purging croton is a woolly-haired annual herb, or evergreen bush, or small tree with smooth ash-colored bark, yellowish-green leaves, small flowers, and fruit.

Jimsonweed**Other Name(s):**

Thorn-apple, stinkweed, Devil's trumpet.

Mechanism(s) of toxicity/injury:

The whole plant is toxic because of tropane alkaloids.



Fragrance from the flowers may cause respiratory irritation, and the sap can cause contact dermatitis. People have been poisoned through consumption of crushed seeds accidentally included in flour; also through attempting to experience the hallucinogenic "high." Can kill. In particular, Devil's trumpet has a quickly fatal potential.

Comments:

Originally called Jamestown weed because of the historic mass poisoning of soldiers sent to quell "Bacon's rebellion" in 1666; they ate the seeds because of a severe food shortage.

Spurge Laurel

Other Name(s):

February daphne, merezon, mezereon.

Mechanism(s) of toxicity/injury:

Diterpene alcohols and coumarin glycosides in the bark, leaves, and fruit are the toxic agents. Has a yellow dye (umbelliferone), malic acid, oil wax, gum, and mezerein resin.

Whole plant is toxic. Resin is acid; has been used in the past as pepper substitute, with fatal consequences. Vesicular dermatitis when skin contact is made (extract used by beggars to induce skin lesions to arouse pity).

Comments:

A very dangerous ornamental. A folk remedy for many symptoms ("dropsy," "neuralgia," snakebite, etc.).



Pigeonberry

Other Name(s):

Golden dewdrop

Mechanism(s) of toxicity/injury:

Underground parts contain toxins. Berries and leaves have a saponin that causes sleepiness, fever, and seizures;

deaths of children are on record. Dermatitis when handled.



Comments:

Tree or shrub with many yellow to orange globular juicy fruits with few seeds. Small flowers are light blue or white. Native to tropical America. Grown as an ornamental shrub in tropical and subtropical areas of the world.

Mole Plant

Other Name(s):

Caper spurge, Mexican fire plant, milkweed; red spurge, poison spurge, mala mujer; cypress spurge; cat's milk, wart-wort, sun spurge; candela-bra cactus; Indian spurge tree, milkwood, pencil tree, pencil cactus, rubber euphorbia.



Mechanism(s) of toxicity/injury:

Herbs, often with colored or milky sap, containing complex terpenes; irritate the eyes, mouth, and gastrointestinal tract, and many cause dermatitis by direct irritation. In some cases rain water dripping from the plant will contain enough toxic principle to produce dermatitis and kera-

toconjunctivitis; can blind. Some contain urticating hairs (skin contact breaks off ends and toxic chemicals are injected). The caper spurge has killed those who mistook the fruit for capers. The Mexican fire plant was known for medicinal properties in the first century and has killed children. Red spurge causes dermatitis. The pencil cactus has an abundant, white, acrid sap extremely irritating to the skin; has caused temporary blindness when accidentally splashed in the eyes, and has killed as a result of severe gastroenteritis after ingestion.

Comments:

Genus contains 2,000 species of extremely variable form; may appear as herbs, shrubs or trees—many are cactus-like. Fruit is usually a capsule opening in three parts, each one seeded; sometimes a drupe.

Heliotrope

Other Name(s):

Cherry pie, scorpion's tail,
Indian heliotrope.

Mechanism(s) of toxicity/injury:

Cause of large epidemics (Afghanistan, India) of illness following ingestion of bread made with flour contaminated with members of this genus. The pathologic effects (Budd-Chiari syndrome) take weeks to months, and death comes slowly over years. Chronic copper poisoning has occurred associated with this plant.



Comments:

A large genus of worldwide distribution (250 tropical and temperate trees and shrubs).

Barbados Nut

Other Name(s):

physic nut, purging nut,
pinon, temptate

Mechanism(s) of toxicity/injury:

Fruit has two or three black, oily, pleasant tasting, poisonous seeds (also toxic roots and leaves) containing

a plant lectin which, in contrast to many of the toxic lectins, causes toxicity rapidly (has caused death — severe toxicity can follow ingestion of a single seed); also has intensely cathartic oils (some have used the oil for lamps, etc.); has caused fatal intoxication. Bark has been used as a fish poison. Also a skin irritant (hairs), as are all euphorbs.

Comments:

170 species of warm and tropical northern American trees or shrubs, usually with red flowers. Naturalized worldwide. Fruit is a three-sided capsule in many species.



Wood Nettle

Other Name(s):

Moroides, stinger, gypmie

Mechanism(s) of toxicity/injury:

The leaf edges, stems, stalks and fruit-bearing parts have stiff, sharp, stinging hairs — frequently not conspicuous.

On contact, the hair tips break and an extremely irritating liquid is injected into the skin. Light contact results in intense burning pain — can be a serious threat to forestry workers, jungle troops. Death was reported of a man who contacted the dried bark while eating.



Comments:

Tends to be particularly thick in areas of regrowth or replanted forests. Chopping or slashing the bushes will produce prolonged sneezing and intense throat irritation. Light contact tends to be more painful than strong contact — described as tingling interspersed with sharp, stabbing pains accompanied by red irritated areas that grow together and become surrounded with a large flare area.

Mango**Mechanism(s) of toxicity/injury:**

Leaves, stem, and fruit skin contain allergens. Dermatitis will occur from eating the fruit with the skin intact. Vesicular eruption may be confined to the lips and face or generalized. Climbing the tree can result in severe dermatitis. There is also immediate hypersensitivity in some individuals. Ensuring that the fruit is peeled prior to ingestion prevents the reaction.

**Comments:**

The genus includes 35 species, usually large trees, of Indomalaysia. Frequently found near human dwellings, grow 40 to 100 feet, and have lance-shaped leaves. Cultivated varieties have excellent fruit (in some wild-growing plants, fruit is unpleasant), edible raw or cooked. Ground seed used as a flour; the drupe (fruit) is used in chutney, pickles, squashes, etc.

Marking Nut Tree

Photo not available.

Other Name(s):

Tar tree, marking nut

Mechanism(s) of toxicity/injury:

Often occupied by biting ants. many of the plants have reputations for causing severe contact dermatitis. Marking nut tree fruit may drip a black, oily resin that hardens like lacquer. The resin can produce a severe dermatitis. Toxic principles similar to mango tree or poison ivy.

Comments:

Tree indigenous to India; used to make a liquid to mark laundry in India and Malaysia. Fleshy parts of the fruits are edible.

Ironwood**Photo not available****Other Name(s):**

Sasswood, ordeal tree, mancona bark; camel poison, black bean, Cook-town ironwood.

Mechanism(s) of toxicity/injury:

Extremely poisonous; the two main species have similar toxicities. Powerful analgesic (pain reliever) to the mucous membranes.

Comments:

A fish poison.

Dog's Mercury**Photo not available.****Other Name:**

Annual/French mercury

Mechanism(s) of toxicity/injury:

Native to Europe; entire plant is toxic. has been mistaken for edible greens. Emetic or purgative. Has killed.

Comments:

Dye source; carpeting rhizome herb often characteristic of disturbed woodland.

Chinaberry

Other Name(s):

White cedar, African lilac, bead tree

Mechanism(s) of toxicity/injury:

Yellow globose berry with three to five smooth, black, ellipsoidal seeds; has a resin; all parts have a saponin, triterpene neurotoxins, and a gastrointestinal irritant of uncertain chemical nature. Widely varying genetic variable toxicity. Has killed adults.

Comments:

Widely cultivated.



Leprosy Gourd

Other Name(s):

Balsam apple; balsam pear/vine, bitter gourd/cucumber.

Mechanism(s) of toxicity/injury:

Seeds and outer rind of ripe fruit contain a toxalbumin; the ripe fruit has a hypoglycemic agent. Small amounts cause headache, flushing, salivation, dilated pupils, vomiting, diarrhea, abdominal pain. Can kill.

Comments:

A slender vine with small yellow flowers. Fruits have a rough outer rind, variable shape but like a gourd, usually yellowish with reddish pulp.



Velvet Bean

Other Name(s):

Cowhage, cowitch, pica-pica, ox eye bean; horse-eye bean

Mechanism(s) of toxicity/injury:

Many of the species' pods and flowers are covered with irritant hairs. Can be dangerous if they become embedded in the eye. Beans tend to be foul tasting, even after

thorough boiling, so little danger of ingestion exists.

Comments:

Many species are widely naturalized.



Oleander

Other Name:

Rosebay

Mechanism(s) of toxicity/injury:

All parts are extremely toxic. Quickly fatal potential; a single leaf can kill. Toxicity has occurred by cooking fish or meat on oleander branches or from eating honey made from oleander nectar. Symptoms include severe

gastroenteritis (stomach and intestinal inflammation) beginning several hours after ingestion; petechiae (small surface spots) occur in various organs. Eventually coma and digitalis-like toxic signs precede death.

Comments:

Ornamental, evergreen shrub native to Europe or Asia. Leaves are stiff or leathery and the funnel-shaped flowers are pink or white in clusters. Fruit are in pods about 15 cm long.



Glory Lily

Photo not available

Other Name(s):

Climbing lily, pipa de turco

Mechanism(s) of toxicity/injury:

Known to have caused human fatalities; the entire plant is considered toxic, but the tubers have the highest concentration — have been used for suicide and murder in Burma and India. Symptoms begin 2 to 7 hours after ingestion and include oral burning, nausea, dysphagia (difficulty in swallowing), abdominal pains, bloody diarrhea, shock, collapse, death.

Comments:

Slender vine or herb with tuberous roots. Ornamental and used as a medicinal.

Pokeweed

Other Name(s):

Pokeberry, poke salet

Mechanism(s) of toxicity/injury:

Mature stems, roots, and berries are poison (saponins mostly in foliage and roots). Death possible when not prepared properly.



Comments:

Young shoot tips eaten in many cultures; requires proper preparation (boiled with water changes; water contains toxic substances — kills snails that carry bilharzia). Dye from berries used to color ink, wine, and sweets.

Red Sage

Photo not available.

Other Name(s):

Lantana

Mechanism(s) of toxicity/injury:

The toxic principle lantadene A is most dangerously concentrated in the green unripe fruit. Lethargy, gastrointestinal upset occur in 2 to 5 hours, followed by nausea, vomiting, diarrhea, and dilated pupils. Leaves cause dermatitis and irritated eyes. Has caused fatalities in children.

Comments:

Sprawling shrub to 15 feet tall with variably colored, umbrella-shaped flowers in clusters, round leaves, prickly stems that are square and hairy, and a fleshy, dark blue or black drupe type of fruit with a strong scent. Native to Central America, introduced to Europe and then spread worldwide.

Panama Tree**Common Name(s):**

Castano, tartar gum.

Mechanism(s) of toxicity/injury:

Edible seeds, but pods are internal stiff bristles that easily penetrate skin, causing intense irritation.

Comments:

200 tropical species.

***Yellow Oleander*****Other Name(s):**

Nerifolium, lucky nut, be-still tree

Mechanism(s) of toxicity/injury:

Contains cardiac glycosides in all parts; seeds have particularly high concentrations. Signs and symptoms of toxicity begin with numbness and burning in the mouth, dry throat, dilated pupils, abdominal



pain, nausea and vomiting, diarrhea, slow irregular heartbeat, hypertension, seizures, coma, and death. The sap can cause skin and eye irritation.

Comments:

A shrub, usually 1 meter (3 to 4 feet) tall, or sometimes a small tree up to 10 meters (30 feet) tall. Native to tropical America, but has been imported as an ornamental to tropical and subtropical regions. The seeds are used in India for murder.

English Yew

Other Name(s):

Ground hemlock; American yew; Japanese yew.

Mechanism(s) of toxicity/injury:

Taxine A and B, classed as steroid alkaloids, are present in all plant parts except the aril. A single chewed seed is deadly. An hour after ingestion, nausea, dizziness, and abdominal pain begin. This is followed by reddening of the lips, dilatation of the pupils, shallow breathing, tachycardia, and coma. Then the pulse slows, blood pressure drops, and death occurs through respiratory paralysis. No proven treatment exists. Emptying the stomach hours after ingestion may be helpful as leaves may not pass through the GI tract expeditiously. Various clinical measures (circulatory stimulants, artificial respiration, cardiac pacemaker) have not prevented death in suicide cases.



Comments:

An evergreen shrub or small tree bearing a characteristic fleshy, red, sweet-tasting aril with a single green to black, partly exposed, hard-shelled seed within. In North America, the Japanese yew, the toxicity of which may exceed that of the English yew, has repeatedly caused fatal animal poisonings. Was known as the “tree of death” in antiquity.

Mayapple

Other Name(s):

American mandrake

Mechanism(s) of toxicity/injury:

A dangerous plant used in many folk-remedies. The podophyllin resin is in all parts; the rootstock, leaves, and unripe fruit contain the toxin which is a purgative (causes diarrhea). All parts poisonous except the ripe fruit, which is edible. Ingestion results in vomiting and severe diarrhea; fatalities have resulted from repeated ingestion or topical applications of an extract of the rootstock. Was used by Amerindians for suicide.



Comments:

Found in east Asia, the Himalayas, and North America. Historically used by many cultures as a medicinal.

Castor Oil Plant

Other Name:

Castorbean

Mechanism(s) of toxicity/injury:

Used to make a feed supplement; a lectin (ricin — also classed as a toxalbumin), which is a highly toxic chemical, and some glycoproteins with allergenic activity have resulted in serious poisoning. Factors making this a high-risk plant threat are: the attractive nuts with a hazelnut-like taste; ricin is stable in



the presence of gastric enzymes; the fact that 2-6 seeds can be fatal; and the seeds are used to make necklaces, requiring a hole to be bored in the nut, allowing the possibility of toxin to reach the skin and enter the body through minor abrasions. Poisoning becomes evident after several hours — nausea, vomiting, and diarrhea.

Comments:

The seeds of this ancient plant have been found in Egyptian graves dating as far back as 4000 B.C. Cultivated worldwide for 6,000 years for producing castor oil.

Black Nightshade

Other Name(s):

Black or deadly nightshade, common nightshade; horse nettle; bittersweet; Jerusalem cherry; nipple fruit; quena, potato bush, wild tomato; apple of Sodom; white-edged nightshade.



Mechanism(s) of toxicity/injury:

The fruit of the Jerusalem cherry is a black berry; the fully ripe berries are eaten; unripe berries contain solanine alkaloids, which can cause gastroenteritis, weakness, circulatory depression. Can kill.

Comments:

Approaching 2,000 species of herbs, vines, or shrubs covered with small star-shaped hairs. Perfect white, yellow, or blue flowers. Berries have dry or juicy pulp and several seeds. Genus includes a number of food staples (potatoes, tomatoes, and eggplant).

Snakewood

Other Name(s):

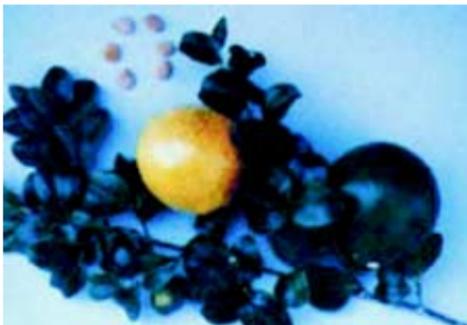
Nuxvomica tree, strychnine tree, curare tree

Mechanism(s) of toxicity/injury:

The whole plant, including the seeds, contains the powerfully acting indole alkaloid strychnine, which can kill.

Comments:

Genus of 190 different species of trees, shrubs, and vines with berry-like fruits, found in most tropical regions. Some have the reputation of having edible fruit despite dangerous seeds. A South American species, is a source of curare obtained by stripping and macerating its bark. Curare, now used as a muscle relaxant, was formerly used as an arrow poison by South American Indians.



APPENDIX J: International Telephone Codes

International Telephone Codes			
Algeria	213	Malta	356
Australia	61	Mexico	52
Austria	43	Morocco	212
Bahrain	973	Netherlands	31
Belgium	32	Nigeria	234
Brazil	55	New Zealand	64
Canada	1	Norway	47
China	86	Oman	968
Cyprus	357	Philippines	63
Denmark	45	Portugal	351
Djibouti	253	Qatar	974
Egypt	20	Republic of Korea	82
Ethiopia	251	Saudi Arabia	966
Finland	358	Senegal	221
France	33	Seychelles	248
Gabon	241	Singapore	65
Germany	49	Somalia	252
Greece	30	South Africa	27
Hawaii	1	Spain	34
Hong Kong	852	Sweden	46
Indonesia	62	Switzerland	41
Iran	98	Syria	963
Iraq	964	Taiwan	886
Ireland	353	Tanzania	255
Israel	972	Thailand	66
Ivory Coast	225	Tunisia	216
Japan	81	Turkey	90
Jordan	962	UAE	971
Kenya	254	United Kingdom	44
Kuwait	965	United States	1
Libya	218	Yemen	967
Madagascar	261	Zambia	260
Malaysia	60	Zimbabwe	263
AT&T (public phones)	0072-911 or 0030-911	On-base	550-HOME or 550-2USA

