## Vietnam Country Handbook

- 1. This handbook provides basic reference information on Vietnam, 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 Vietnam.
- 2. This product is published under the auspices of the U.S. Department of Defense Intelligence Production Program (DoDIPP) with the Marine Corps Intelligence Activity designated as the community coordinator for the Country Handbook Program. This product reflects the coordinated U.S. Defense Intelligence Community position on Vietnam.
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### **Vietnam**

## **KEY FACTS**

Country Name. Vietnam

Official Name. Socialist Republic of Vietnam

**Head of State.** Tran Duc Luong, President of Vietnam since September 1997. He is a member of the Communist Party of Vietnam (CPV) and the party's Politburo.

Capital. Hanoi.

**National Flag.** Red with a large yellow five-pointed star in the center.

**Time Zone.** UTC (formerly GMT) + 7 hours

**Population.** 81.4 million (UN, 2003)

**Languages.** Vietnamese (official), French, Chinese, English, Khmer, tribal languages (Mon-Khmer and Malayo-Polynesian)

**Exchange Rate.** US\$1=16,010 Vietnamese dong (D) (June 2003) Exchange small U.S. denominations for dong to get the best rate.

**Currency.** Bank notes less than 200D have almost no value and are rarely used. No coins are used. U.S. currency is widely accepted, but dong should be carried for taxis and shops.

Calendar. Gregorian



National Flag





National Emblem (left) and Coat of Arms (right)

### **U.S. MISSION**

## U.S. Embassy

**Location** 7 Lang Ha Street, Ba Dinh District, Hanoi **Mailing Address** PSC 461, Box 400, FPO AP 96521-0002

 Telephone
 [84] (4) 772-1500

 Fax
 [84] (4) 772-1510

 E-mail
 irchano@pd.state.gov

 Hours
 0800 – 1700, weekdays

### U.S. Consulate

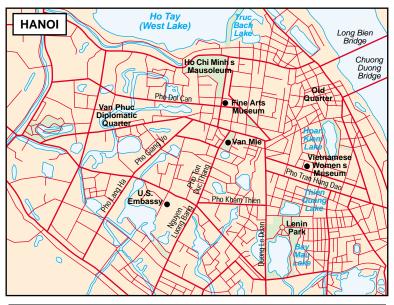
**Location** 4 Le Duan Street, District 1, Ho Chi Minh City

**Telephone** (84) (4) 822-9433 **Fax** (84) (4) 822-9434

**E-mail** uscongenhcmc@pd.state.gov **Hours** 0800 – 1700, weekdays The workweek in Vietnam is Monday-Friday for government employees and Monday-Saturday for non-government employees. Government offices open at 0800 and close between 1600 and 1700. One should avoid doing business from 1130 to 1400, when people break for lunch.

#### Travel Information

Vietnamese prefer to deal in cash; however, credit cards are increasingly used in hotels, restaurants, and shops in big cities. Traveler's checks in U.S. dollars can be exchanged at Vietcombank, the state bank. Australia and New Zealand Banking Group Limited (ANZ) and Vietcombank have ATM machines that dispense only Dong. Most will accept foreign ATM cards, but travelers should check with the bank for special requirements. For cash advances, travelers can go to ANZ in Ho Chi Minh City (11 Me



Map to U.S. Embassy in Hanoi

Linh Square., D.1, Ho Chi Minh City, Telephone: 829 9319) or in Hanoi (14 Ly Thai To Street, Hanoi, Telephone: 825 8190). Some traveler's cafes will provide cash advances at higher rates. One should not accept torn or soiled bills, as they are difficult to spend.

## **Entry Requirements**

# Passport/Visa Requirements

Valid passports and visas (diplomatic, official, tourist or business) are required. Personnel will be issued an entry/exit permit on arrival that must be presented when leaving Vietnam. A copy of all documentation should be carried at all times. Originals and other valuables should be left in a hotel safe or other secure area.

Thirty-day tourist visas are issued by Vietnamese Embassies through a travel agent or tour operator. Extensions are obtained at the Immigration



U.S. Embassy, Hanoi

Office at 40A Hang Bai Street in Hanoi, telephone: 826 6200. Even with a valid visa, travelers may be refused entry. Changing the type of visa issued requires permission from the appropriate Vietnamese authority.

Passports should never be used as security for rental vehicles, collateral for hotel payments, etc. It is common for hotels to retain a passport until checkout. In the event of a lost/stolen passport, the U.S. government may issue a new passport to a U.S. citizen. The Vietnamese government may seize passports and block the departure of foreigners involved in commercial disputes.

### Immunization Requirements

Vaccinations for hepatitis A (or immune globulin) and typhoid are required. Malaria pills should be taken in rural areas, except for the Red River Delta and the coastal plain north of Nha Trang. Hepatitis B, Japanese encephalitis, and rabies vaccinations may be required.

#### **Customs Restrictions**

When entering Vietnam, visitors must declare all precious metals, jewelry, cameras, electronic devices, alcohol, and tobacco products. Travelers may need to produce these items upon departure to prove they weren't sold on the black market. Foreign currency in excess of US\$3,000 (D5 million) must be declared on arrival and departure. In addition to illegal drugs and weapons, the Vietnamese government authorities have seized documents, audio and video tapes, compact discs, literature, and personal letters they deem to be religious, pornographic, political in nature, or intended for religious or political proselytizing. Importing and exporting dong and live animals is forbidden. Receipts must be shown for all purchases that are leaving the country.

### GEOGRAPHY AND CLIMATE

## Geography

Vietnam is located in Southeast Asia. It is north of the Equator but south of the tropic of Cancer. It borders China to the north and Laos and Cambodia to the west. The South China Sea (called the East Sea by the Vietnamese) runs along its eastern border. Vietnam is roughly the size of New Mexico.

Vietnam's claim to territorial islands increases its total area to 329,560 square kilometers (127,200 square miles). Vietnam's land boundaries total 4,639 kilometers (2,878 miles). Extending 1,650 kilometers (1,025 miles) north to south, the country is only 50 kilometers (31 miles) across at its narrowest region.

#### **Statistics**

**Total land area** 325,360 sq km (125,600 sq mi)

**Coastline** 3,444 km (2,138 mi)

**International borders** *Cambodia:* 1,228 km (763 mi)

China: 1,281 km (795 mi) Laos: 2,130 km (1,320 mi)

Land use Arable land: 17%

Land use Arable land: 17%

Permanent crops: 4.7%

Forests and woodland: 30% Other: 48.3%

**Elevation extremes** *High:* Fan Si Pan 3,144 meters (10,315 feet)

Low: South China Sea: sea-level



#### Southeast Asia

#### **Boundaries**

Vietnam's maritime claims along the eastern border are the following, in order of north to south: the Gulf of Tonkin, the South China Sea and the Gulf of Thailand for a coastline of 3,444 kilometers (2,138 miles) (excluding the islands). Vietnam has a 200-nautical-mile exclusive economic zone, 200-nautical-mile continental shelf, 24-nautical-mile contiguous zone and 12-nautical-miles of territorial waters.

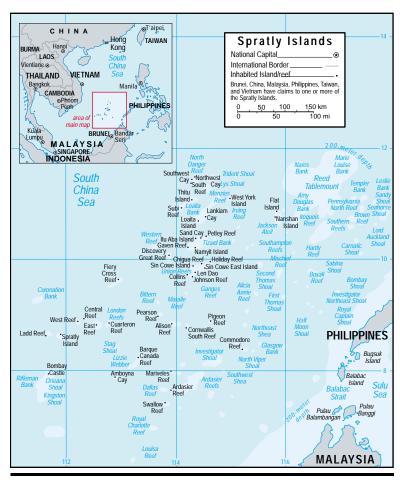
### **Border Disputes**

Vietnam has many border disputes. The maritime boundaries with Cambodia and China are not defined. Land boundaries with Laos are still under discussion. The Paracel Islands are occupied by China but, claimed by Vietnam and Taiwan. The most serious border dispute is over the Spratly Islands. The islands are located in the South China Sea, which is one of the world's busiest international sea lanes. They are part of a region that contains oil and gas resources. They are strategically located near large, energy-consuming countries. Six nations have competing claims for the territory in the South China Sea that could potentially threaten Southeast Asia's long-term stability. China, Vietnam, and Taiwan all have claims based on history. Malaysia, Philippines, and Brunei have claims based on international law. Without China's cooperation, a solution is impossible, Beijing refuses to accept a multi-lateral solution. There appears to be no sign of resolution.

### **Bodies of Water**

Vietnam's two rivers, the Red River and the Mekong River, provide both water and transportation making them immensely important to the Vietnamese. The Mekong River, the tenth largest in the world, flows by 50 million people in 6 nations. The Mekong River begins in the forested mountains and uplands of southwestern China, and flows 4,200 kilometers (2,610 miles) to the South China Sea, passing through Burma, Laos, Thailand, Cambodia, and Vietnam. The river has a fresh water lake that acts as a reservoir during flood stages, greatly reducing the danger of devastating floods. The Red River, flowing for 1,200 kilometers (746 miles),

may increase in size by more than 60 times at the peak of the rainy season. Extensive flood control, including dikes and canals has resulted in dense population and rice growing.



Spratly Islands

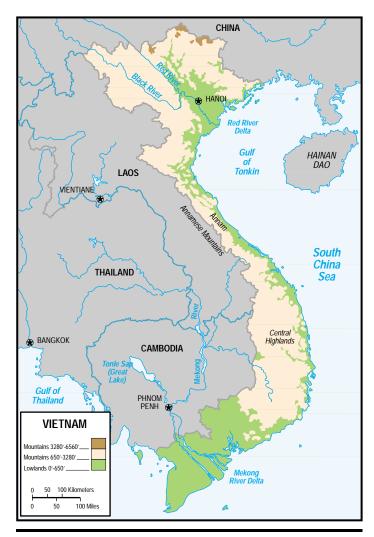
## **Topography**

Vietnam is a land of contrasts. Mountains and hills cover 80 percent of Vietnam's territory with the Truong Son range stretching more than 1,400 kilometers (870 miles). Mount Fan Si Pan, 3,144 meters (10,315 feet), is the highest peak in Southeast Asia. In the south, sealevel lowlands dominate Vietnam's border with Cambodia. The Red River Delta in the north and the Mekong River Delta in the south are Vietnam's most cultivated and populated areas. Ho Chi Minh City and the capital, Hanoi, both lie in these delta regions. A low-lying, narrow coastal plain connects the two deltas.

An unspoiled coastline, a preserved Asian way of life, and spectacular areas of beauty have contributed to Vietnam initiating a tourist industry. While the government has made investments developing a tourist industry, poor transportation remains a problem.



Coastline Near Vung Tau



**Topography and Drainage** 



**Rural Northwest Mountains** 

# Urban Geography

Twenty-five percent of the Vietnam's population live in an urban setting, 75 percent in a rural setting. Ho Chi Minh City (Saigon), at 4 million in population, and Hanoi at 3.1 million, are the largest cities. Most locals still call Ho Chi Minh City by its pre-revolutionary name, Saigon. Haiphong and Da Nang are also significant cities.

The capital, Hanoi, is preparing for major reconstruction on the outskirts of the city with plans for high-rise apartments, villas, shopping malls, and schools. There is also a plan to create a new urban center by 2020. This project is expected to substantially impact the entire economy.

The cities of Vietnam, particularly Ho Chi Minh City and Hanoi, are bustling urban centers with few reminders of a communist state. As a result of the economic reform and growth, industrialization and population migration are rapidly causing environmental degradation. Distinctions



### **Downtown Ho Chi Minh City**

arising from the previous division of the country are still evident between the towns and cities of the north and south.

### **Environment**

Mosquitoes are everywhere and plenty of repellent should be worn on skin and clothes to protect from their bite. Cockroaches are very large but pose no direct threat. There are many poisonous snakes outside the cities, so carry a snakebite kit.

Vietnam has a variety of plants and animals. The forests are estimated to contain 12,000 plant species and the country is home to: 273 species of mammals, more than 800 species of birds, 180 species of reptiles, 80 species of amphibians, hundreds of species of fish, and thousands of invertebrates. Animals include: elephants, rhinoceros, tigers, leopards, crocodiles, pythons, cobras, and black bears.

Vietnam has various environmental problems including:

- Deforestation and soil degradation caused from logging and slash and burn agricultural practises.
- Threatened marine life populations caused from water pollution and excess fishing.
- Limited potable water because of contamination of groundwater.

# Vegetation

Forest cover has reduced from 45 to 15 percent in south Vietnam, as a result of chemicals used during the Vietnam war, particularly Agent Orange. Deforestation from logging and coffee growing continued into the 1990s, causing soil erosion and flooding. Vietnam has become more susceptible to natural disasters in the post-1970 period, after forests that had retarded water runoff in the monsoon season were destroyed.

#### Climate

Vietnam has a tropical monsoon climate, with humidity averaging 84 percent throughout the year. However, because of differences in latitude and the variety of topographical relief, the climate tends to



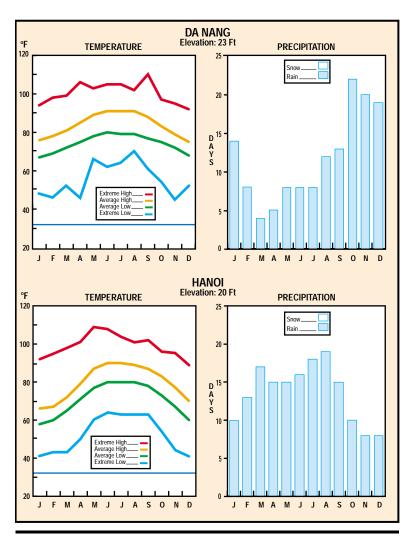
**Defoliation by Agent Orange** 

vary considerably. Vietnam has two seasons: cool and dry from November to April and hot and rainy from May to October. The difference between summer and winter temperatures is dramatic in the north. The south is warm year-round, with little seasonal variations in temperature.

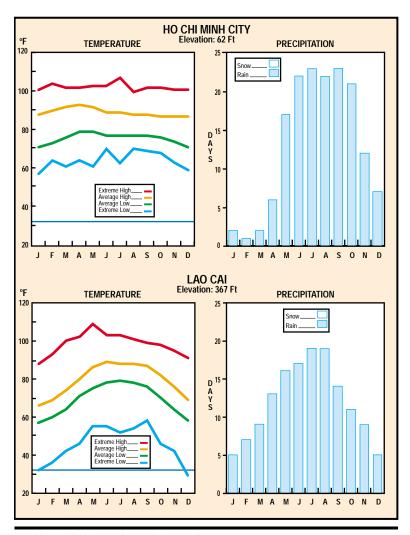
Travelers should be aware of possible health concerns such as heat exhaustion and dehydration that can result from the constant heat and humidity in Vietnam.

At sea level, the mean annual temperature is about  $27^{\circ}\text{C}$  ( $80.6^{\circ}\text{F}$ ) in the south, falling to about  $21^{\circ}\text{C}$  ( $69.8^{\circ}\text{F}$ ) in the extreme north. There is a drop in mean annual temperature of about half a degree for each increase of 100 meters (62 feet) in elevation. Because about one-third of Vietnam is more than 500 meters (311 feet) above sea level, much of the country enjoys a subtropical or, above 2,000 meters (1,243 feet), even a temperate climate. The annual mean temperature for Hanoi is  $23^{\circ}\text{C}$  ( $74^{\circ}\text{F}$ ) and  $26^{\circ}\text{C}$  ( $80^{\circ}\text{F}$ ) for Ho Chi Minh City.

Vietnam lies in the Southeast Asian inter-tropical monsoon zone. Its weather is determined by two monsoons, which set the rhythm of rural life. The relatively dry winter monsoon, mainly affects the area north of Da Nang. The winter monsoon comes from the northeast between October or November and ends in March. The southwestern monsoon occurs from April or May to October. The southwestern monsoon brings warm, damp weather to the majority of the country, except those areas sheltered by mountains (such as the central coastal lowlands and the Red River delta). Humidity can reach 90 percent in the rainy season. Most of Vietnam receives in average of 2,230 millimeters (88 inches) of rain annually, though parts of the central highlands get approximately 3,300millimeters (130 inches) of precipitation each year. The northern Red River delta is subject to drought, while the Mekong River delta in the south is subject to heavy flooding.



Da Nang and Hanoi Weather



Ho Chi Minh City and Lao Cai Weather

#### Phenomena

Vietnam experiences more natural disasters than most of Southeast Asia, with an average of 10 typhoons per year and frequent flooding caused by both flash and seasonal floods. Much of Vietnam is at high risk for seasonal flooding, due to heavy rainfall during Vietnam's rainy (May to September) and typhoon (October to December) seasons, along with outdated and poorly maintained infrastructure. Northern Vietnam is most likely to experience flooding during the rainy season, while central and southern Vietnam are most likely to experience flooding from August to November. In 2000, the Mekong River floods were the worst in 40 years, affecting more than 376,300 homes. At least 13 people were killed and thousands of hectares of rice crops were destroyed.

The U.S. Embassy in Hanoi or U.S. Consulate in Ho Chi Minh City will make available any information they have on possible flood situations.

## Cross-country Movement

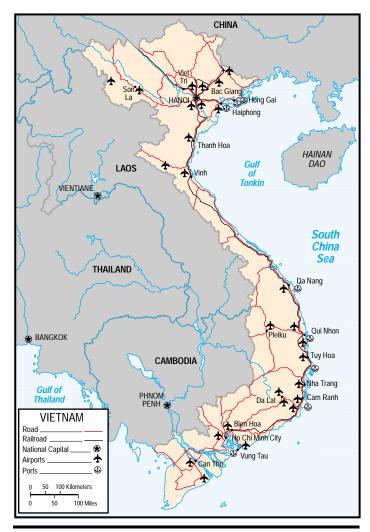
Mountains running north to south, heavy forests, and poor public transportation may hinder cross-country movement, particularly east to west.

## TRANSPORTATION AND COMMUNICATION

### **Transportation**

Overall, transportation conditions are poor and underdeveloped by U.S. standards. Traffic in Vietnam is chaotic. Traffic accident injuries are the leading cause of death or severe injury among foreign visitors.

Although often dilapidated, crowded and time-consuming, many visitors use the mass-transit bus system, which covers many areas and some long distances. There is also an extensive informal transport network of *Xich lo* (pedicabs) and *Xe Om* (motorbike taxis) that are often preferred. The fare must be bargained. Avoid hiring independent car and van operators.



**Transportation Network** 

### Roads

Vietnam's road system totals 105,000 kilometers (65,244miles) but only 10,500 kilometers (6,524 miles) of paved roadway. Road conditions are variable nationwide, although the government has recently invested heavily in upgrading the road network. A four-lane Ho Chi Minh Highway, linking Hanoi and the south, is nearing completion. Streets in major cities are choked with motorcycles, cars, buses, trucks, bicycles, pedestrians, and pedicabs. Vehicles travel on the right. The most popular forms of transport are motorbikes and scooters. Drivers do not follow basic traffic principles. Dangers on the roadway include livestock blocking the roadway, vehicles at night with no lights, and limited ability of trauma care to respond.

International or U.S. driver's licenses are not considered to be valid in Vietnam. Foreigners renting vehicles risk prosecution and imprisonment for driving without a Vietnamese license. In the past, Americans



Ho Chi Minh City Traffic



Construction on Ho Chi Minh Highway

involved in traffic accidents have not been allowed to leave the country before paying compensation.

### Rail

Trains travel slowly, with an average speed of 15 kilometers per hour (9 miles per hour). The Vietnamese railway network consists of 3,142 kilometers (1,952 miles) of largely outdated track that uses three different types of gauge. The standard gauge (1.435 millimeters) runs for 209 kilometers (130 miles). The narrow gauge (1.000 millimeters) runs for 2,625 kilometers (1,631 miles), and the dual gauge (three-rail track combining the narrow and standard) runs for 308 kilometers (191 miles). The railway is administered in three divisions, with head-quarters at Da Nang (central), Hanoi (northern), and Ho Chi Minh City (southern). A huge upgrade and expansion process is being imple-



### Railway Station in Hanoi

mented by the government and is supposed to be finished by 2020. Some upgrades are already completed and the trains have had an increase in the number of passengers.

### Air

There are three major airports that receive international flights: Hanoi is served by Noi Bai airport and receives about 80 international and around 100 domestic flights per week. Ho Chi Minh City is served by Tan Son Nhat airport and receives about 200 international and 150 domestic flights per week. Da Nang is a former U.S. military base and receives about 20 international flights per week. Since the late 1990s, air services have improved greatly to and from Ho Chi Minh City, Hanoi, and Da Nang. The amount of air traffic has grown by 30 percent per year, prompting major upgrades of each. Hanoi had a new terminal open in 2001 but Ho Chi Minh's airport is by far the busier of the two and is currently being upgraded. Da Nang's upgrade is to be completed by 2005.

The main civil airline is Pacific Airlines, which is owned by a collection of state-owned companies. In 2000, the carrier opened Da Nang to international traffic with the first direct flight between Da Nang and Hong Kong. Vietnam Airlines, owned directly by the state services 15 international and 22 domestic destinations.

There are many other airlines with service to Vietnam, including: Qantas Airways (Australia), Lufthansa German Airlines, British Airways, Air France, and other major Asian airlines.

There are 34 airports in Vietnam, of which 17 have paved runways. There are 8 runways that are more than 3,047 meters (9,997 feet) in length; 3 runways between 2,438-3,047 meters (7,999-9,997 feet); 4 runways between 1,524-2,437 meters (5,000-7,995 feet); and 2 runways under 914 meters (2,999 feet).

Airport Name	Elevation	Runway	Runway/	
Coordinates	m (ft)	L x W m (ft)	Condition	Aircraft Capacity
Cam Ranh Bay 11 59 53N 109 13 09E	28 (95)	3,048x 46 (10,000x152)	Concrete/ Good	C-141B; C-130; Daylight ops only; VFR; Unsuitable KC- 10; KC-135; C-9; C-21
<b>Noibai Intl</b> (Hanoi) 21 13 18N 105 48 20E	11 (39)	3,200x45 (10,499x148)	Concrete/ Good	C-141B; C-130; C-17; KC-10; KC-135; C-9; C-21; Jeppesen-See GDSS or web for explicit authorization
Tan Sonnahat Intl (Ho Chi Minh) 10 49 12N 106 39 42E	10 (33)	3,048x45 (10,000x148)	Concrete/ Good	C-141B; C-5; C-130; C-17; KC-10; KC-135; C-9; C-21; Jeppesen-See GDSS or web for explicit authorization.
Nha Trang 12 13 38N 109 11 32E	6 (20)	1,950 x45 (6,400x148)	Asphalt/Good	Daylight ops only; VFR only; C-130; Unsuitable: C-141B, C-5, C-17, KC-10, KC-135
<b>Phan Rang AB</b> 11 38 00N 108 57 06E	31 (102)	3,045 x45 (9,990x148)	Concrete/ Good	C-141B; C-130; C-17; KC- 10; KC-135; KC-10, KC-135, ops req prior DOAS approval; Daylight ops only; VFR only; C-9; C-21

Airport Name	Elevation	Runway	Runway/	
Coordinates	m (ft)	L x W m (ft)	Condition	Aircraft Capacity
Tuy Hoa AB	28	2,901x 45	2 Concrete/	Unsuitable: C-141B, C-5,
13 02 58N	(92)	(9,520x150)	Poor;	C-130, C-17, KC-10, KC-135
109 20 01E			1 Asphalt/	
			Unserviceable	
Qui Nhon	6	1,470x 29		C-130; Daylight ops only;
13 4 60N	(20)	(4,823x98)		VFR only;
109 14 00E				Unsuitable: C-141B, C-5, C-
				17, KC-10, KC-135
Pleiku AB	742	1,830x 36	GRE/	Unsuitable: C-141B, C-5,
13 58 50N	(2,435)	(6,004x120)	Unserviceable	C-130, C-17, KC-10, KC-135
108 02 18E				
Phu Cat	31	3,051x45	Concrete	C-141B; C-130; C-17; KC-
13 57 17N	(102)	(10,010x148)	Good	10; KC-135; KC-10,
109 02 32E				KC-135 ops limited to runway
				only; C-17,
				C-141ops req prior DOAS
				approval for taxiway width; Daylight ops only; VFR only;
				C-9, C-21
Da Nang Intl	7	3,048x45	Asphalt	C-141B; C-130; C-17;
16 02 38N	(26)	(10,000x148)	Fair	KC-10; KC-135; Jeppesen-
108 11 57E				See GDSS or web for explicit
				authorization; C-9; C-21

### Maritime

Vietnam has 90 ports. The government is investing heavily to upgrade its port network, raising the number of ports to 114 by 2010. The most significant ports are: Haiphong (north), Ho Chi Minh City (south), and Da Nang (central). Other ports include Vung Tau and Hongay.

Most of the 17,702 kilometers (11,000 miles) of navigable inland waterway is only accessible to small craft; larger craft can navigate about 5,000 kilometers (3,107 miles) of waterway. The most significant networks are those formed by the Mekong and Red River tributaries.



Ho Chi Minh City Port

# Ports

Port Name/		Anchor	Pier	
Coordinates	Berths	Depth	Depth	Comments
<b>Haiphong</b> 20 52N/106 40E	23	6-9.4 m	8 m (26.2 ft)	Petroleum, dry bulk, general cargo, containers, Roll on/roll off, bunkers, dry dock, towage; good cond; berth for tankers with max. depth of 5.8 m
<b>Vung Tau</b> 10 21N/107 4E	13		5 m (16.4 ft)	Petroleum, bunkers, towage; good cond.
Ho Chi Minh City 10 45 50N 106 42 32E	9	8.5-9.5 m	9 m (29.5 ft) 12m (39.3 ft)	Petroleum, other liquid bulk, dry bulk, general cargo, containers, bunkers, dry dock, towage, airport within 100 km; busiest; good cond.
<b>Da Nang</b> 16 06N/108 18E	13	10-16 m	6.5-9 m, (channel depth 13 m)	Petroleum, dry bulk, general cargo, roll on/roll off; bunkers, dry dock, towage, airport within 100 km; berthing usu. limited to daylight hrs; good cond.
<b>Hongay</b> 20 57N/107 03E	4	10 -21 m	8.20 m (26.8 ft)	Petroleum, other liquid/dry bulk; general cargo, bunkers, towage, airport within 100 km; good cond.

#### Communication

The Communist Party of Vietnam tightly regulates and censors the media, but limited criticism of authority is still possible. The services are state-owned and operated.

#### Radio

There are 16 AM and one FM radio station. The most popular stations are: *Tieng Noi Vietnam* (Voice of Vietnam) and *Phat Tanh*. Hanoi-based Voice of Vietnam is the national broadcaster and broadcasts in English, as well as several other languages. Foreigners usually rely on shortwave services that include: the BBC, Radio Australia, Christian Science Monitor Radio, and Voice of America.

#### Television

Almost everyone owns a television. Local television is broadcast almost all in Vietnamese, the news in English is broadcast in Ho Chi Minh City after 2200. Even though satellite TV and cable are still officially restricted, they are widely available. Star TV from Hong Kong is popular and channels, such as CNN or Discovery, can usually be obtained. There are two TV broadcast stations.

### **Telecommunication**

Although there is considerable modernization and expansion, including an attempt to create an entirely wireless communications system, the telecommunications system lags behind Western standards. There are many people without a telephone in rural areas. In key urban centers, telecommunications is adequate. Vietnam has only 2.6 phone lines per 100 people.

International service is very good but very expensive, especially from hotels. Rates vary and many times have extra fees so check rates before dialing. Public phones require phone cards, which are available at post offices. Faxes can be sent from hotels, business centers, or post offices.

Vietnam has invested heavily in a cellular network. Mobile phones are used by almost everyone for local and international calls. The most widely used company is MobiFone. One can buy either prepaid phone cards or pay monthly. The telephone country code is 84.

Telecommunication is controlled by the Vietnamese government through the Department General of Post and Telecommunications, virtually no direct foreign investments are allowed.

#### Internet

The internet is used extensively in Vietnam. Hanoi and Ho Chi Minh City offer cyber cafes with internet access, e-mail, computer leasing, and printing. Internet access is offered at most major hotels. As of 2002, there were 400,000 users with 5 service providers. The internet country code is ".vn". Computers are usually found in businesses and schools, but are not yet widespread within private homes (6 percent of urban households have computers).

### Newspapers and Magazines

There are many English publications available. For daily news of interest to the foreign community, the *Vietnam News* is available. For economic developments, a government publication *Saigon Times* is available. *Vietnam Investment Review* is a weekly publication directed to foreign business people. Various publications published outside of Vietnam as well as leading international newspapers and magazines can be found in hotels frequented by foreign business travelers.

### Postal Service

Mail service is unpredictable, especially outside of major cities. Same day service is possible, although not certain, in the major cities. Airmail is relatively expensive and takes about 10 days to reach its destination. The post office does provide Express Mail Service (EMS) to several countries as well as between Ho Chi Minh City and Hanoi. Several international couriers also provide EMS to Vietnam, generally taking

4 to 5 days for packages to reach North America. Incoming or outgoing packages are subject to inspection, confiscation, and customs duty.

#### Satellites

There are three satellite earth stations in Vietnam.

## **CULTURE**

Vietnam has the 13th largest population in the world and experiences the problems of having a large population. Parents with more than two children have sanctions imposed.

Ethnic Vietnamese are predominantly concentrated in rural regions (about 80 percent), mainly in the Red River (north) and Mekong River (south) deltas along the coastal plain. Due to a historically violent and difficult past, many Vietnamese fled their country. Many are now being repatriated from other Asian nations, such as Cambodia. If the political system in Vietnam were to change, more would possibly return.

The southern part of Vietnam has kept many of the social and cultural influences of the West while the north continues to be more traditional.

## **Statistics**

Population81.4 million (UN, 2003)Ethnicity88 percent Vietnamese

3 percent Chinese

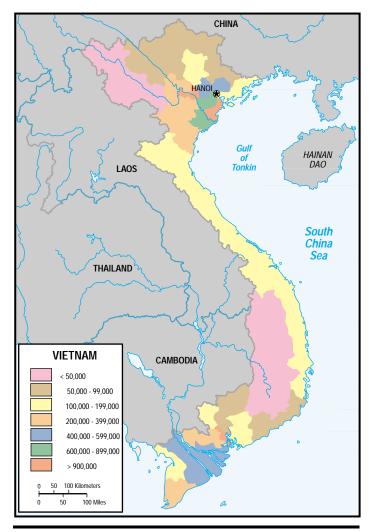
9 percent Hao, Khmer, Cham, and 53 other

minority groups

**Age structure** 0-14 years: 31.6%

15-64 years: 62.9% 65 years and older: 5.5%

**Population growth rate** 1.43% (July 2002 est.)



**Population Density** 

# Society

# People

Respect for authority and harmony with others are crucial values for the Vietnamese. Avoiding embarrassment and maintaining harmonious relationships demonstrate respect. Other values include marital fidelity, generosity, hard work, and promptness.

Vietnam is a blend of many different cultures, customs, religions, and increasing international influence. This illustrates an open-mindedness and tolerance in the Vietnamese culture. However, some hostility does exist between the overwhelming majority of ethnic Vietnamese and the many minority groups. Despite working towards and being enthusiastic about a better future of wealth and security, the Vietnamese continue to work to maintain traditional values.

The Vietnamese possess a deep sense of national pride, after long periods of domination by the Chinese, French, and 30 years of civil war. However, the people tend to focus on the future rather than the past.



**Typical Riverside House** 

They are often baffled by the fixation of some Americans with the Vietnam War (or American War, as it is called in Vietnam), which they see as part of history. In fact, rather than being anti-American, most of the people have an interest in all things American. They do not understand the image others hold of them, as an aggressive warlike country; they feel all past hostilities have involved the natural defense of their national territory. Overall, attitudes towards foreigners are welcoming and interest is taken in the visitor's personal and national identity.

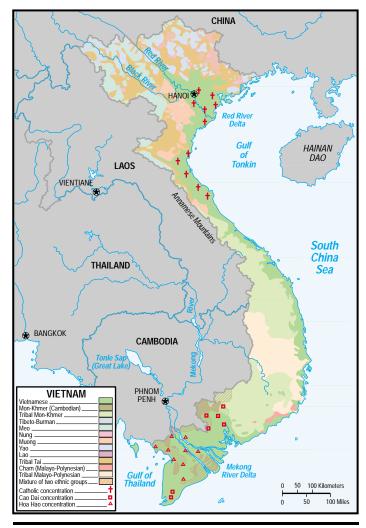
# Ethnic Groups

The Vietnamese's strong ethnic identity is due to a widespread common language, as well as a shared cultural heritage filled with hardship. An overwhelming majority, 84 percent of ethnic Vietnamese, or *Kinh*, are not receptive to the many minority groups found throughout the country. A Chinese population, usually merchants, makes up 3 percent of the population. There are more than 50 minority groups that are 8 percent (8 million) of the overall population, ranging from the largest, the Tay with 1 percent (1.2 million), to the smallest, the O Du with 194 members. The largest minority groups, the Tay, Muong, and Thai, are primarily in the north and known collectively as the *Montagnard*, the mountain people. In 2001, *Montagnard* resentment toward lowlanders resettling in mountain regions resulted in violent protests. The largest minority in the south is the Khmer.

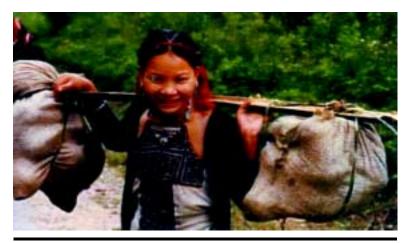
Concerns over human rights abuses with ethnic and religious minorities exist. The welfare, freedom, and social justice of such minorities has been questioned by many. Violent protests, such as in February 2001 by an estimated 5,000 people from various ethnic groups of the north, voiced frustration about suppression of their culture, need for political autonomy, freedom of religion, and the return of confiscated ancestral lands.

# **Family**

The family is considered to be the most important aspect of Vietnamese life. In rural areas, family ties extend to a village identity, as well. Obligations that children have to their parents, wives to their husbands, and



**Ethnic Concentration** 



Dao Girl

youth to their elders are far more important than an individual's interests. An entire extended family, including parents, unmarried children, and married sons with their families, all live in the same household. Urban areas are seeing an increase in the number of single-family homes. However, families maintain strong ties and provide each other with assistance and support as needed. Vietnamese names begin with the family name, followed by a middle name and a given name.

Women are prominent in government and business, although they continue to face deep-rooted social discrimination that has hindered them from obtaining higher status positions and equal pay. Compared to other parts of the region, women are treated with more respect and as a rule are on par with male colleagues in social situations. The wife and the husband are both considered wage earners, although the man is the authority in the household. Young people are free to choose their mates, but are encouraged to marry after the man is 25 and the woman is 23.



**Wedding Preparations** 

# **Education and Literacy Rates**

The highly literate population (95 percent for males and 91 percent for females) reflects the Vietnamese respect for education. Primary education is free, starting at age 6 and lasting for 5 years. The school week is Monday through Saturday. All children are encouraged to finish high school. Most children are able to complete primary education, but the drop out rate increases as young people leave to find work to help support their families.

University education is tuition-free to qualified students, but there is stiff competition for the available positions. Some students attend universities under provisions of a law approved in 1998 that encourages private sponsorship of education by individuals and businesses. The number of universities and institutions of higher learning is rising as social and economic conditions improve.

# Language

Vietnamese is the main language, spoken by 85 percent of the population with minor regional accents. Other than the official Vietnamese language, Chinese, French, English, Khmer, and tribal languages are used. Khmer is spoken by the Cambodian minority in the south and Chinese is used by 2 million ethnic Chinese. English is widely spoken among the emerging middle class and the political and economic elite. French language use is diminishing, despite popularity among the elderly. The majority of media is in Vietnamese, although some stations and publications can be found in English and French. Most business will involve English speaking Vietnamese. The study of English is popular.

Vietnamese uses the Latin alphabet and is a tonal language that can be very difficult to learn. Each syllable is a word, but up to four syllables can be joined together to form a new word. For instance, *thanh* (fresh)



Minority Villager's Houses Near Dakrong Bridge

joins with *nien* (years) as *thanh nien* (youth). Each word has six different tones, each with a different meaning. In written form, the word's tone is indicated by a symbol, usually above the word's main vowel. The Vietnamese consider their language very poetic.

# Religion

Throughout their long history, the Vietnamese have been exposed to many different religious influences. The result is a mosaic of many of the world's great faiths.

Although some Vietnamese practice more than one religion at a time, most consider themselves Buddhists (55 percent). Buddhists believe in reincarnation and karmic destiny (if a man is good in this life, the he will be rewarded with a better life after he is reincarnated).

Taoism and Confucianism are also widely practiced. Taoism



Notre Dame in Ho Chi Minh City

emphasizes the belief in the spirit world and ancestral worship. Confucianism, which is not a formal religion, emphasizes good behavior, education, and respect for hierarchy. There is also a small percentage that practices Catholicism, Protestantism, Islam, and Cao Daism. Cao Daism is indigenous to Vietnam and combines beliefs and practices from Buddhism, Catholicism, Confucianism, Islam, and history on the basis that it is combing the best beliefs from all different religions. Despite the variety of beliefs, almost all Vietnamese venerate their ancestors. Almost every family has their own altar where they may offer prayers in the hope that the ancestor can influence the destiny of the living.

In 1992, the constitution formally guaranteed freedom of religious believes, yet it is subject to certain conditions, including undermining national unity, creating division between religious believers and nonbelievers, and abusing freedom of speech, press, and religion. Overall, religious repression still occurs when the government feels threatened.

## Recreation

Favorite sports for Vietnamese men are volleyball and soccer (football). Badminton, tennis, table tennis, bicycling, swimming, football and horse racing are also popular in the cities. Jogging, yoga or another form of exercise in the morning is popular for urban people of all ages. However, only young, unmarried women tend to participate in team sports. Men like to play checkers in their spare time. Various types of theater are also enjoyed, including: traditional Chinese opera, Vietnamese operettas, and water puppetry. Visiting friends and family is common in the evenings or during the weekend.



**National Museum** 



Hanoi's Municipal Theater

For foreigners visiting Vietnam, there are numerous activities, beaches, historical sites, and quality restaurants. Nightlife is limited, although karaoke bars are popular. It is usually difficult for foreigners to socialize with Vietnamese, due to language and social barriers.

## **Customs and Courtesies**

To greet someone informally, a slight bow of the head standing about 3 feet apart is appropriate. To greet someone formally, shake their hand, using both hands to show respect. A variety of phrases are used during a greeting and almost all of them are accompanied by a title. The titles are based on family, as if everyone is related. For example, the most common greeting is *Di dau day*? (Where are you going?). A person greeting an older man would call the man *bac* (uncle) when greeting, *Bac di dau day*? Peers might call each other by their given names and younger people are addressed by their given names.

Everyday dress for both men and women generally consists of slacks, or a skirt for women, worn with a casual cotton or knit blouse or sport shirt. For special occasions, women wear the traditional *ao dai*, a long dress with front and back panels worn over satin trousers.

# Dining

White rice is eaten with chopsticks at all three meals. The main meal includes rice, a salty dish, a vegetable dish, and soup. The rice bowl is held in one hand, as it is considered lazy to eat from a rice bowl that is on the table.

One should not leave a pair of chopsticks sticking vertically in a rice bowl. This looks very similar to the incense sticks that are burned for the dead and is considered to be a powerful death sign. It is customary when using a spoon, to hold it in the left hand. Small portions are taken from the serving bowls in the middle of the table and placed into one's individual rice bowl. One should not eat the last portion of any dish and should not leave any food in an individual bowl. Female guests help female hosts wash the dishes.



**Drying Rice** 

# Social Etiquette

Within Vietnamese society, failure to observe social customs can be interpreted as disrespect. To avoid inadvertently offending others the following should be observed:

- One should remove shoes when entering a temple, a Vietnamese home, or any other place where others have removed their shoes.
- One should dress neatly and conservatively; one should not wear shorts or anything that can be considered provocative.
- A small gift, such as flowers, incense, or tea is appropriate when visiting a Vietnamese home.
- Visitors should try to speak at least a few words of Vietnamese.
- One should not cross one's legs when sitting, show the soles of one's feet, or point one's feet at other people, or at anything sacred.
- Arms should not be crossed, or hands placed on hips during conversation, as this conveys hostility.
- One should not touch the head of a Vietnamese; it is considered the body's most spiritual point.
- Men and women should not show affection in public.
- Both hands should be used to pass an object to another person
- Proper respect should be shown to elderly people.
- One should be aware of the great care that is given to "save face" in public, which may sometimes cause a Vietnamese person to hesitate in giving an outright "no" in response to a question.
- One should never criticize or become angry in public.
- One should not summon a person with an index finger. Instead, all four fingers should be waved with the palm down. Hand gestures are limited and verbal communication is preferred.

# MEDICAL ASSESSMENT

# Infectious Disease Risks to Deployed Personnel

Vietnam is assessed as high-risk for infectious diseases. Without force health protection measures, mission effectiveness will be seriously jeopardized. The following is a summary of the infectious disease risks in Vietnam. Risk varies greatly depending on location, individual exposures, and other factors. Serious diseases may not be recognized or reported due to lack of surveillance and diagnostic capability.

#### Foodborne and Waterborne Diseases

Sanitation is poor throughout the country, including major urban areas. Local food and water sources (including ice) are heavily contaminated with pathogenic bacteria, parasites, and viruses to which most U.S. service members have little or no natural immunity. Diarrheal diseases can be expected to temporarily incapacitate a high percentage of personnel within days if local food, water, or ice is consumed. In those not vaccinated, hepatitis A and typhoid fever can cause prolonged illness in a lesser percentage (potentially 1 to 10 percent per month). Viral gastroenteritis (e.g., Norovirus) and food poisoning (e.g., Bacillus cereus, Clostridium perfringens, Staphylococcus) may cause significant outbreaks. Additionally, consuming unpasteurized dairy products or raw animal products increases the risk of transmission of diseases such as brucellosis and Q fever.

## Vectorborne Diseases

The climate and ecological habitat support large populations of arthropod vectors, particularly mosquitoes. Significant disease transmission is sustained year-round and countrywide, including urban areas. Dengue fever and malaria are the major vectorborne risks in Vietnam, capable of debilitating a high percentage (potentially 11-50 percent per month in the absence of countermeasures) of personnel for up to a week or more.

A few cases (less than 1 percent of personnel per month) of symptomatic Japanese encephalitis could occur. Severe disease and death can occur. Other vector-borne diseases occur at low or unknown levels, and as a group may constitute a serious risk comparable to that of malaria.

# Sexually Transmitted and/or Bloodborne Diseases

Gonorrhea, chlamydia, and other infections may affect a high percentage of personnel who have sexual contact, particularly with prostitutes. A small number (less than 1 percent per month) of personnel having unprotected sexual contact, particularly with prostitutes, could become infected with hepatitis B (if unvaccinated). Rare cases of HIV could occur among personnel having unprotected sexual contact. Heterosexual contact is the predominant mode of HIV transmission. Though the immediate impact of HIV/AIDS and hepatitis B on an operation is limited, the long-term health impact on individuals is substantial. A variety of other sexually transmitted diseases, including chancroid, herpes, syphilis, and venereal warts are common in prostitutes, and may cause symptomatic infection in personnel having unprotected sexual contact.

#### Water-contact Diseases

Operations or activities that involve extensive freshwater contact (lakes, rivers, streams, or other surface water) may result in personnel being temporarily debilitated with leptospirosis and schistosomiasis in some locations. In addition, bodies of surface water are likely to be contaminated with human and animal waste. Activities such as wading or swimming may result in exposures to enteric diseases such as diarrhea and hepatitis via incidental ingestion of water. Prolonged water contact may also lead to the development of a variety of potentially debilitating skin conditions such as bacterial or fungal dermatitis.

# Respiratory-borne Diseases

Annual incidence of active tuberculosis in 2000 was estimated at 189 per 100,000 (compared to the U.S. rate of approximately 6 per 100,000).

Prolonged contact with the local population may result in conversion rates to tuberculosis skin testing (TST/PPD screening) that may be elevated over U.S. military baseline.

In addition, deployed U.S. forces may be exposed to a wide variety of common respiratory infections in the local population. These include influenza, pertussis, viral upper respiratory infections, viral and bacterial pneumonia, and others. U.S. military populations living in close-quarter conditions are at risk for substantial person-to-person spread of respiratory pathogens. Influenza is of particular concern, because of its ability to debilitate large numbers of unvaccinated personnel for several days.

#### Animal-contact Diseases

Rabies is a major public health problem countrywide. Rabies-infected dogs and cats are extremely common, and human infection is usually associated with direct animal contact (bites or scratches). Rabies deaths occur regularly among the local population.

## Medical Capabilities

Health care quality is below Western standards and does not compare well with Hong Kong, Singapore, South Korea, and Taiwan; however, Vietnam's health care quality exceeds that of Cambodia and Laos.

Increased openness with other countries and international health agencies has led to health sector improvements, as evidenced by Hanoi's ability to successfully cope with the 2003 SARS epidemic. Moreover, reforms that have reduced central government control of the economy, legalized private-sector health care, and allowed foreign investment and joint ventures have resulted in advances in medicine.

Military and civilian physicians are knowledgeable within the confines of their limited experience with modern Western equipment, methods, and precepts. Vietnamese health workers at private hospitals and clinics who employ Western medical personnel reap training opportunities and thus are better qualified. There is an oversupply of physicians in major cities; rural areas have shortages of qualified health professionals and resources.

State-run hospitals are crowded, not well funded, and have poor quality care. Although the quality of care at private medical treatment facilities is much higher, exorbitant costs limit access to those who can afford it.

Domestic pharmaceutical manufacturing capabilities cannot meet the country's needs; Vietnam relies heavily on imported medicines. The Vietnamese tend to self-medicate, particularly with antibiotics. Because of the high cost of Western drugs, self-treatment often is stopped when symptoms subside, thus contributing to serious drug resistance problems.

Blood collection programs are inadequate and can only meet about 15 percent of domestic requirements. Shortages of trained personnel and supplies, particularly outside major cities, make the quality of blood screening and testing suspect.

National and local level emergency response capabilities are limited. The Ministry of Health coordinates disaster response with the Ministry of Defense, Vietnam's Red Cross, and other government agencies. Cooperative efforts occur, but budget constraints hamper effective responses. Nongovernmental organizations and nations with an established relationship with Vietnam would provide emergency and disaster response assistance.

Health care will likely continue to improve but will depend largely on Hanoi's continuance of policies toward openness to the world community, which will further the confidence of foreign investors. Current economic projections appear positive, particularly in the health care sector.

## **Key Medical Facilities**

## **Bach Mai Hospital**

City Hanoi

Location Gia Phong Street,

North of intersection of Highways 1a and 606

Coordinates 21-00-05N 105-50-26E Telephone (84)(4) 869-3731, 869-3732

Type Public; 1,300 beds

Capabilities Medical — internal, cardiology, nuclear medicine,

neurology, pediatrics, radiology, dermatology; surgical — ear/nose/throat (ENT), orthopedics, obstetrics/gynecology; ancillary — optometry, x-ray, pharmacy, laboratory with blood bank, poison control

center, hemodialysis.

Comments Teaching facility affiliated with Hanoi Medical Univer-

sity. Touted as the most advanced medical facility in northern Vietnam, but general level of care is below Western standards. Upgrades, with help from Japan, will include 480 additional beds and 6 operating rooms.

## Hanoi French Hospital/French International Hospital

City Hanoi

Location Phuong Mai Road, Dong Da District,

one block north of Bach Mai Hospital complex.

Coordinates 21-00-12N 105-50-28E

*Telephone* (84)(4) 574-0740; emergency (84) 5 741 111

Type Private hospital/joint venture; 90 beds

Capabilities Medical — general family practice, internal medicine,

trauma emergency care, dentistry; surgical — neurosurgery, visceral surgery, orthopedic, urology, laparoscopy, minor surgery, ophthalmology, ENT, obstetrics/ gynecology; ancillary — pharmacy, laboratory, x-ray. Comments Opened in 1997. Since January 2000, has been run by a

French company in a joint venture with the Vietnamese. Fully equipped operating room. Staff includes at least 17 Vietnamese and 11 foreign physicians. FIH and Bach Mai hospitals were the designated severe acute respiratory syndrome (SARS) hospitals, and are considered Hanoi's best facilities. These facilities are adjacent to each other, which may have been instrumental in isolating the virus to a confined area of the city. Previously Vietnam International Hospital.

Franco-Vietnamese Hospital

City Ho Chi Minh City

Location 6 Nguyen Luong Bang, Tan Phu Ward, District 7

(southern outskirts of the city)

Coordinates 10-46-XXN 106-40-XXE

Telephone 08 411 3333
Type Private; 140 beds

Capabilities Most medical and surgical specialties are probably rep-

resented. Five operating suites and an 8-bed ICU; the

capacity of both is expected to double in 2004.

Comments Staffed by Western physicians, outfitted with state-of-

the-art diagnostic equipment, and well-stocked with medicines approved by France's equivalent of the U.S. FDA. Probably is Ho Chi Minh City's best hospital for emergency care. Provides greater options by lessening the need to medically evacuate emergency patients to Thailand or Singapore. The hospital would be a major player in any effort to combat a SARS challenge

should it re-occur in Vietnam.

**Cho Ray Hospital (Nam Viet Hospital)** 

City Ho Chi Minh City

Location 201 Nguyen Chi Tranh Road, District 5

Coordinates 10-45-25N 106-39-34E

Telephone (84)(8)825-4137, 825-8074, 855-4137, 855-4138

Type Public; 1,000 beds

Capabilities Medical — general; surgical — ophthalmology, ENT,

orthopedics, pediatrics, obstetrics/gynecology; ancillary — 20-bed intensive care unit (ICU), 50-bed burn unit laboratory, 100-bed tropical disease center (treats

snake bites), blood bank, pharmacy, x-ray.

Comments One of southern Vietnam's best hospitals and trauma

centers, but general level of care is below Western standards. Tenth floor reserved for foreign visitors; associated physicians speak English and French and probably have had some Western training. Funding and probably expertise received from Japan. Well-

equipped operating rooms, ICU, recovery.

## HISTORY

A natural crossroads between north, south, east, and west on the Indochina Peninsula, Vietnam has endured many conflicts and has developed from many races, languages and cultures.

Vietnam's recorded history begins in 111 BC, when China's Han dynasty conquered the Red River delta area. For more than 100 years, the Chinese ruled Vietnam, and instilled Confucian ideas in politics, education, and philosophy.

In 939 AD, Vietnam achieved independence when Ngo Quyen defeated invading Chinese troops,



Ho Chi Minh Statue



**Venerated Statues of Medieval Vietnamese Emperors** 

and the first of many Vietnamese dynasties began. For nine centuries the Vietnamese remained independent, but not without struggle. During that time, the Vietnamese repulsed the Mongols and for the majority of the 14th century were at war with Champa, a region now part of southern Vietnam.

At the beginning of the 15th century, the Chinese regained control, and for the next 20 years harshly ruled Vietnam as a province of China. During this time, taxes and forced labor were imposed on the Vietnamese. Many Vietnamese traditions and practices were forbidden. However, unlike the upper classes, which were largely assimilated into the Chinese culture, the peasantry was less exposed to Chinese influence, and retained the Vietnamese language and cultural traditions.

The French invaded in 1858, starting in the south. By 1885, they had annexed all of Vietnam, allowing the Vietnamese emperors to reign, but

not actually to rule. Near the end of World War II, the Japanese replaced the French, who had been forced to abandon the colony.

While retaining the Vietnamese monarchy, the Japanese installed a pro-Japanese government. At the end of World War II, the Allies divided Vietnam into two zones for the purpose of disarming Japanese troops. The British were given the south and the Chinese were given the north. The division of the country remained even after the Japanese troops were disarmed, because the British returned the south to French rule, while the Chinese restored the Vietnamese emperor, Bao Di, in the north. Bao Di was soon forced to abdicate because of uprisings (called the Autumn Revolution) in major northern cities, including Hanoi.

The Viet Minh, anti-French, and communist led by Ho Chi Minh took over rule of the north. Ho Chi Minh declared independence on 2 September 1945. The Franco-Viet Minh War began in 1946 because of a customs dispute, and in response to the French attack on Haiphong.

#### North and South Partition

Following the catastrophic French defeat at Dien Bein Phu in 1954, the signing of the Geneva Accords by France and the Democratic Republic of Vietnam brought the war to an end. The Geneva Accords, an agreement on the cessation of hostilities, provided for a cease fire between communist and anti-communist nationalist forces, the temporary division of Vietnam at the 17th parallel, provisional northern (communist) and southern (non-communist) zone governments, and the evacuation of anti-communist Vietnamese from northern to southern Vietnam. The agreement also called for national elections in 1956. However, the South refused to recognize the accord.

On 26 October 1955, the South held elections, which were allegedly rigged, and declared Ngo Dingh Diem president of the Republic of Vietnam. While Ngo Dinh Diem ruled oppressively in the South, the North destroyed all opponents of the regime and imposed harsh agrarian reforms and socialization programs. The network of Communist gueril-



#### Ho Chi Minh Museum

las from both North and South, known as the Viet Cong, reactivated, and they started a campaign against officials and villagers who refused to support the communist reunification cause. This ultimately culminated into civil war.

The Soviet Union and China backed the North, and the United States supported the South. The war spread to Laos and Cambodia. In 1961, President Kennedy first sent U.S. military advisors to help South Vietnam. In 1963, after a general's coup against President Diem, the United States increased its military support. After the Gulf of Tonkin incident in 1964, (when Vietnamese forces attacked U.S. naval forces), President Johnson sent the first U.S. combat forces to Vietnam in March of 1965. The in-country force eventually peaked at 534,000 in 1969.

The Viet Cong's surprise Tet Offensive, in which 105 towns in the South were attacked simultaneously in January 1968, hurt both the Viet Cong infrastructure and the morale of the Americans and South Vietnamese.



Cu Chi Tunnels at Ben Duoc Northwest of Ho Chi Minh City (top) and Vinh Moc Tunnel (bottom)

Peace talks in Paris, France with representatives from the United States, the governments of North and South Vietnam, and the Viet Cong began in January 1969. The talks moved slowly and finally concluded with the Paris Accords on 27 January 1973.

As a result of the Paris Accords, U.S. forces were removed while some advisors remained, and the South was divided into a patchwork of zones controlled by the South Vietnamese government and the Viet Cong. The fighting continued between the North and the South until the communists took Saigon on 30 April 1975. Saigon's name was officially changed to Ho Chi Minh City (although most Vietnamese still call it Saigon). On 2 July 1976, the Democratic Republic of Vietnam (north) absorbed the former Republic of Vietnam (south) to form the Socialist Republic of Vietnam. For Vietnam as a whole, the war resulted in some 1.5 million military and civilian deaths, 362,000 invalids, 1 million widows, and 800,000 orphans.

Almost a million refugees fled Vietnam after the communist victory in the South (as of 1982, United Nations High Commission for Refugees). Those who remained faced years of poverty, repression and international isolation. Refusing to recognize the government, the United States imposed an economic embargo that lasted almost 20 years.



My Lai Memorial



**Church With Bullet Holes** 

After the American War (as the Vietnamese call it), Le Duan was appointed General Secretary of the Communist Party of Vietnam (formerly the Vietnam Worker's Party), and Ton Duc Thang became president. The new government confiscated privately owned land, forced citizens into collectivized agricultural practices, and sent government and military officials previously opposed to communism to re-education camps. In 1980, a new constitution was adopted, Truong Chinh was appointed President of the Council of State (head of state) in 1981, but real power remained with Le Duan.

The international community did not condone the socialist transformation, and was concerned about Vietnam's internal practices as well as the Vietnamese invasion of Cambodia in 1978. The invasion toppled the Khmer Rouge, and installed a pro-Hanoi regime. China, which had long supported the Khmer Rouge regime in Cambodia, invaded northern Viet-

nam in 1979 in retaliation. The attacks by China were repulsed without any loss in territory, and a border agreement was finally settled in 1999.

The guerilla fighting in Cambodia throughout the 1980s proved costly both in Vietnamese lives and to post-war reconstruction. In 1989, Vietnam withdrew its occupation forces from Cambodia; the two countries reconciled their differences in the early 1990s, and are today close allies. Because of the continuing tensions with its neighbors and its stagnant economy, many Vietnamese continued to flee Vietnam into the early 1990s. Chinese specifically fled by boat, fearing persecution.

Vietnam suffered from isolation and a stagnant economy; however, the 1990s seemed to initiate a new trend of peace. The 1986 Sixth Party Congress eased communist agrarian and commercial policies through its economic liberalization policy of *doi moi* (renovation). The United States sought to restore its relations with Vietnam by lifting the sanctions against Vietnam in 1994, by creating an office in Hanoi to coordinate the search for U.S. soldiers missing in action, and by a visit from President Clinton in November 2000. In July of 2000, the U.S.-Vietnam Bilateral Trade Agreement (BTA) was signed. The agreement paved the way for permanent normal trading relations, and saw a large increase of Vietnamese exports to the United States.

The renewed diplomatic relations with the United States and admission to ASEAN (the Association of Southeast Asian Nations) ended Vietnam's isolation, and hastened its integration into the international community. A revised constitution in 1992 allowed foreign companies to invest in Vietnam. As Vietnam continues to experience international investment and trade, it has chosen to focus on internal development, such as economic restructuring, private enterprise and other market-oriented policies, and open international trade. Since independence, political issues that continue to be of concern are corruption, especially within the Communist Party; social unrest between the minority groups and the Kinh (ethnic Vietnamese); balance between liberalization and

dominance of the Communist Party (CPV); and competing international maritime claims.

# **Chronology of Key Events**

Date	Event
1930	Ho Chi Minh founds the Indochinese Communist
	Party (ICP).
1941	ICP organizes guerilla force, Viet Minh, in response to inva-
	sion by Japan during World War II.
Sept. 1945	Proclamation of Democratic Republic of Vietnam by Ho
	Chi Minh; Viet Minh seizes power.
1946	Indochina War begins with French attack of Haiphong.
1954	French defeated at Din Bien Phu. Geneva Accords divide
	Vietnam in two.
1955	Republic of Vietnam (south) established; Diem president.
1962	U.S. military advisors reach 12,000 in the South.
1963	Ngo Dinh Diem overthrown and assassinated.
1964	U.S. destroyer allegedly attacked by North Vietnamese
	patrol boats. Congress passes the Gulf of Tonkin Resolu-
	tion, authorizing the President to use force.
1965	U.S. bombs North Vietnam; 200,000 U.S. ground troops
	arrive at Da Nang.
1968	Tet Offensive begins. More than 500 civilians die in massacre
	at My Lai.
1969	Ho Chi Minh dies; Nixon begins to reduce number of
	ground troops as public opposition grows.
1973	U.S. troops leave, following Paris Agreement.
April 1975	Saigon surrenders.
July 1976	Vietnam unified; establishment of Socialist Republic of
	Vietnam. Hundreds of thousands flee Vietnam after war.
1978	Vietnamese invasion of Cambodia to oust Khmer Rouge
	regime of Pol Pot.
1979	Chinese refugee crisis; 9-Day War with China.
1987	Political prisoners released from re-education camps.
1988	Famine in northern Vietnam.

Date	Event
1989	Vietnamese troops leave Cambodia.
1990	Government dismissed or charged 18,000 officials at all levels in an attempt to stop corruption.
1995	U.S. and Vietnamese relations restored. Vietnam joins Association of South East Asian Nations (ASEAN).
1997	Six high officials sentenced to death following highly publicized anti-corruption trials.
1999	Border treaty signed with China and 38 Government of Free Vietnam (GFVN) members are arrested for plotting to bomb communist monuments. Former senior party member, Pham The Duyet, expelled after calling for democracy and freedom of expression.
2000	U.SVietnam Bilateral Trade Agreement.
2001	Ethnic minorities protest in central highlands. Vietnam and Russia sign comprehensive agreement on military, trade and economic co-operation.
2002	Jiang Zemin makes landmark visit to Hanoi. Former prime minister implicated in corruption case.

# **GOVERNMENT AND POLITICS**

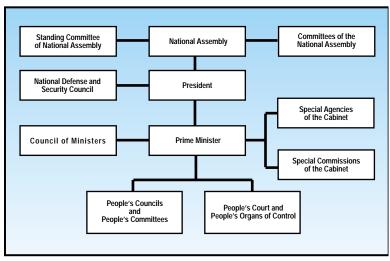
#### Government

The Communist Party of Vietnam (CPV) has all political power. With the adoption of a new constitution in 1992, the central role of the Communist Party in politics and society was reaffirmed despite increased economic freedom. Though Vietnam remains a one-party state, national priorities have shifted from adherence to ideological orthodoxy to economic development as a nation. The criticism of government is allowed, but not welcomed. Corruption began to be seriously addressed with major changes in the government in 1997, when senior businessmen and government officials were tried and sentenced to death for involvement

in corruption scandals and illegal narcotics trafficking. This included the former chairmen of Tamexco, of Vietcombank, and of First Vina.

#### National Level

**Executive Branch.** The significant powers in the Vietnamese government, after the Communist Party, are the executive agencies created by the 1992 constitution: the offices of the president and the prime minister. The president is the head of state, but also serves as the nominal commander of the armed forces, and chairman of the Council of National Defense and Security. The National Assembly elects the president for a 5-year term. The Prime Minister heads a cabinet of 4 deputy prime ministers, as well as the directors of 31 ministries and commissions, all of whom are confirmed by the National Assembly. The president appoints the prime minister.



#### **Government Structure**



Ho Chi Minh Memorial and City Hall in Background

The president, the prime minister and the cabinet are all members of the Communist Party's Central Committee, also referred to as a politburo, which is the decisionmaking body of the CPV.

Legislative Branch. Constitutionally, the National Assembly, a unicameral legislature, is the highest government organization. It is the highest level of a representative body of the people, and is the only organization with legislative powers. It has a broad mandate to oversee all government functions. Once seen as little more than a rubber stamp, in recent years, the National Assembly has become more vocal and assertive in exercising its authority over lawmaking. The National Assembly is still subject to the CPV authority, and all candidates are screened and must be CPV approved. Of the 498 seats, 85 percent of the deputies in the National Assembly are party members; 14 percent are members of the Vietnamese Fatherland Front (VFF), a communist controlled political organization; and 1 percent are independents. The assembly meets twice

per year for 7 to 10 weeks; members are elected to a 5-year term. The last election was in 2002.

The present 18-member politburo, elected in 1997 and headed by Communist Party General Secretary Le Kha Phieu, determines government policy, and its 5-person standing committee oversees day—to-day policy implementation. The general secretary exerts power alongside the prime minister and the president. Although there has been some effort to discourage membership in overlapping party and state positions, this practice continues. Seven of the politburo members hold concurrent positions in the government. In addition, the Party's Central Military Commission, which consists of select politburo members and additional military leaders, determines military policy.

**Judicial Branch**. There is a separate judicial branch, but it is relatively weak. The Supreme People's Court heads the judiciary with its chief justice elevated for a five-year term by the National Assembly, which acts on the recommendation of the president. There are People's Courts at local, district, and city levels.

There are few lawyers, and trial procedures are rudimentary. The education camps established after the end of the Vietnam War are closed, but religious and political dissidents are still held without trial. The legal system is inadequate, and has a confusing bureaucracy.

# Key Government Officials

President
General Secretary,
Communist Party of Vietnam
Prime Minister
First Deputy Prime Minister
Deputy Prime Minister
Deputy Prime Minister

Nong Duc Manh Phan Van Khai Nguyen Tan Dung

Tran Duc Luong

Vu Khoan

Pham Gia Khiem



President Tran Duc Luong (left) and Prime Minister Phan Van Khai (right)

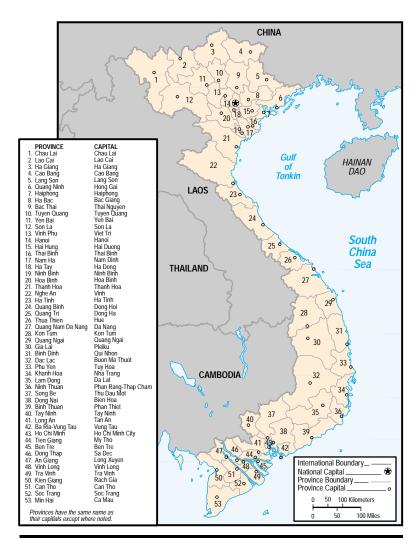
#### Local Level

Provinces and municipalities, which are centrally controlled, are subdivided into towns, districts, and villages. These subdivisions have local autonomy through an elected people's courts. Neighborhood solidarity cells act as a subdivision to the wards and villages. The people's councils represent the local authority of the state. Council members are popularly elected, although the party screens all candidates. They are responsible for ensuring strict local observance of the constitution and laws, as well as the maintenance of local armed forces units.

## **Politics**

#### Political Parties

Vietnam is a single-party communist state, ruled and controlled by the Communist Party of Vietnam (CPV). The party politburo is elected by



#### **Administrative Divisions**

the party central committee and broadly frames national policy as well as issuing guidelines to the government. This ensures that the will of the CPV is adhered to in all matters. Although restrictions on public discourse have relaxed, debate on many issues, especially criticism of the government, is still limited by the CPV. Alongside the president and prime minister, the party general secretary has considerable power, and heads the secretariat and politburo. The party and its politburo controls both the electoral process and the executive branch.

There is no risk to the political domination of the CPV, though there is a decline in public confidence, which has been caused by difficult living conditions throughout the country, social injustices, and corruption. This lack of public confidence remains a source of worry for party leaders. The effort to drive out corrupt officials is also an attempt to maintain public confidence. There is also a lack of interest in joining the party among Vietnam's youth, who are a majority of the population. The youth doubt the party's ability to manage the economy (in the context of globalization and information technology), or to contain the corruption in the government.

A party congress meets every 5 years to set the direction of the party and the government. The 170-member central committee, which was elected by the party congress, usually meets twice per year. The Ninth Party Congress was held in 2001.

The Government of Free Vietnam is a non-violent organization dedicated to the transformation of the Vietnamese government led by Nguyen Huu Chanh. The organization is seeking increased support from both domestic and international sources. There are also a number of other organizations whose aim is the same, such as the Coalition of Vietnamese National Parties and the Free Vietnam Alliance (FVA).

## **Elections**

The president is elected by the National Assembly from among its members for a 5-year term. The prime minister is appointed by the president

from among the members of the National Assembly. Deputy prime ministers are appointed by the prime minister. The cabinet is appointed by the president on the proposal of the prime minister and ratification of the National Assembly. The members of the National Assembly are elected by popular vote for a 5-year term.

The last national election was held on May 19th, 2002. The next election is due in 2007.

# Suffrage

All citizens may vote at age 18. There is an obligation to vote, but there is no penalty for failing to vote.

# Foreign Relations

Vietnam's relationship with other countries has made great improvements in the last 10 years, ending its period of isolation after the Vietnam War as it continues economic liberalization. The number of countries maintaining official relations has increased from 24 in 1989 to more than 150 in 1995.

**United States.** Relations with the United States were restored after the lifting of the trade and aid embargo in 1993, restoration of diplomatic relations in 1995, the U.S.-Vietnam Bilateral Trade Agreement in 2000, and a visit by President Clinton. Clinton's visit marked the establishment of diplomatic and economic ties between the two countries. He was the second president to visit Vietnam.

In July 2000, the Bilateral Trade Agreement was signed, giving Vietnam the same access to the U.S. market and tariffs as Western and ASEAN nations. The agreement has helped significantly increase Vietnamese exports to the United States, as well as raise U.S. investment in Vietnam.

Despite the restoration of trade relations, human rights violations continue to impede closer relations. The United States continues to grant asylum to refugees who have escaped from the central highlands into Cambodia. The United States unveiled a controversial Vietnam Human

Rights Bill in 2002 that was met by angry rebuttal in Hanoi. There is concern about the intolerance of religion (especially Christianity) and opposition to the government. Pressure for political change also continues to be a source of tension. The relationship between militaries is slowly improving, and Vietnam benefited from the U.S.-led war on terrorism when the United States targeted U.S.-based Vietnamese anticommunist groups.

China. There was an immeasurable improvement in relations with China when Vietnam withdrew from Cambodia in 1989. A border settlement in 1999 helped to further reduce tension. In 2002, Jiang Zemin, President of China, visited Vietnam. Although there are still inherent prejudices from the Sino-Viet border wars of the late 1970s, politically and economically, the two countries have much in common. They are among the last surviving communist regimes in the world, and both are embracing similar economic reform.

However, competing claims to the Spratly and Parcel Islands remain a source of contention. The islands are located in the South China Sea, which is one of the world's busiest international sea-lanes. They are part of a region that contains oil and gas resources. The islands are strategically located near large energy-consuming countries. China and Vietnam are determined to resolve the claims issue peacefully for the sake of economic development, but total resolution demands major concessions, which both are unlikely to concede in the future.

**Cambodia.** Vietnam's military withdrawal from Cambodia in 1989 helped to improve relations, but there remains underlying mistrust as a result of decades of conflict and mutual antagonism. There is a disagreement on the demarcation of their border, especially at sea, although the disputes seem to be edging closer to a resolution.

**India.** India sees Vietnam's support as a useful counter-weight to increasing Chinese influence in Pakistan. A defense cooperation agreement between Hanoi and New Delhi in 2000 allows for high-level military, security, and intelligence exchanges. Although trade between the

two countries remains negligible, India sees Vietnam as potential security for reducing their dependence on Persian Gulf oil sources.

**Russian Federation.** After Russian President Vladmir Putin's visit to Vietnam in 2001, Communist Party General-Secretary Nong Duc Manh's visit to Moscow and St. Petersburg in 2002, and Vietnam's debt repayment to Russia, Putin announced a new strategic partnership in military, trade, and economic cooperation. The main trade discussions include the expansion of oil and gas sectors, an increase in Russian military sales to Vietnam, and increased export of Vietnamese consumer goods.

Laos. Despite continuing economic difficulty and sporadic attacks by insurgents, there is no obvious direct threat to the political relationship with neighboring Laos, which remains one of Hanoi's closest allies. Although there remains a threat of terrorist action by externally-based anti-communist groups, the prospect of terrorist action producing a change of regime has receded in the wake of increased global concerns over terrorism, as well as the arrest of a key activist in the United States.

### **Association of Southeast Asian Nations**

Vietnam's withdrawal from Cambodia in 1989 and its acceptance into ASEAN in 1995 made possible improved relations with its neighboring countries in Southeast Asia, Japan, and the European Union (EU). Membership in ASEAN has allowed Vietnam to be fully integrated into Southeast Asia, improved its strategic position with China, reinforced its acceptance as a stable part of the region, and further encouraged confidence in its rapidly developing economy. In 1999 and 2000, trade and economic cooperation with Japan improved.

### **European Union**

In 2002, the European Union (EU) announced it would assist Vietnam in its fight against poverty and help introduce economic and administrative reform. In 2001, EU provided US\$300 million, or 20 percent of the country's total official development assistance.

### **International Organizations**

Vietnam is a member of:

- Association of Southeast Asian Nations (ASEAN)
- International Atomic Energy Agency (IAEA)
- International Organization of Francophony (OIF)
- Mekong River Commission
- Non-Aligned Movement (NAM)
- Asian Pacific Economic Cooperation (APEC)
- Food and Agriculture Organization (FAO)
- International Atomic Energy Agency (IAEA)
- International Monetary Fund (IMF)
- United Nations (UN)
- UN Educational, Scientific, and Cultural Organization (UNESCO)
- UN Industrial Development Organization (UNIDO)
- World Health Organization (WHO)

Vietnam has signed to the following treaties and agreements:

- Nuclear Non-Proliferation Treaty (1982)
- Geneva Protocol (1980)
- Seabed Treaty (1980)
- Outer Space Treaty (1980)
- Bio-chemical Weapons Convention and Environmental Modification Treaty (1980)
- U.S.-Vietnam Bilateral Trade Agreement (2000)

### Outlook

Vietnam is attempting to move to a market economy without political liberalization, is working to stop corruption, and is addressing the human rights abuse concerns raised by the international community.

Foreign policy is mainly decided through economic considerations. Communist party leaders have initially been slow to transfer power, and have resisted democracy. However, the party congress of 2001 achieved a balance of greater democracy with a renewed commitment to socialism. There is concern that if collective farming and state-owned enterprises were to be opened to competition that stability would be undermined, individualism encouraged, and the party's monopoly of power weakened. However, with acceptance into the World Trade Organization (WTO) expected by 2005, there is a growing sense that the pace of economic reform needs to accelerate.

Corruption is a major concern, especially within the government and security forces. In 2002, Transparency International ranked Vietnam as the second most corrupt country in the region. Besides discouraging investment, corruption has had social impacts on the country as high-ranking officials are implicated in drug trafficking cases. An attempt to oust corrupt party officials and to put them on trial is underway.

The government continues to struggle with human rights issues. Social unrest and threats to national unity is increasing in rural areas.

# **ECONOMY**

Since the mid-1980s, with the encouragement of private enterprise, the densely populated, economically poor Vietnam has made strides in recovering from the war, the loss of financial support from the former Soviet Bloc, and the lack of flexibility in a centrally planned economy. The heart of the economy remains in the south as a continuing consequence of the 1954 political division when the north and south adopted separate economic ideologies.

### **Statistics**

**Gross Domestic Product** US\$34.1 billion (2002 est.)

 Real growth rate
 7.0% (2002 est.)

 Per capita
 US\$2,100 (2001 est.)

**Inflation Rate** 3.8% (2002 est.)

**Debt** US\$14 billion (2002 est.)

**Unemployment Rate** 25% (1995); 6.13% (2001-VNM est.)

**Imports** US\$17.27 billion (2002 est.)

Refined petroleum, steel, cloth, computers,

electronic goods, and plastics

**Exports** US\$16.53 billion (2002 est.)

Crude oil, textiles, garments, fish, footwear,

and rice

**Labor Force** 40.4 million

Since the government's *doi moi* (renovation) economic reform package in 1986, Vietnam has become one of the fastest growing economies in the world. Gross domestic product (GDP) growth has been substantial. Inflation is under control, and investment, exports, and domestic savings have increased substantially. Growth did slow during the 1997 Asian financial crisis and the global recession in 2001, but has recovered and remains strong. The slowing in growth revealed major structural inefficiencies, and unemployment is a large problem, with levels in rural areas reaching up to 35 percent during non-harvest periods. The government seeks to maintain a more moderately paced reform. The U.S.-Vietnam Bilateral Trade Agreement has helped to significantly increase Vietnam's exports to the United States, as well as attract foreign investment. Overall, the marketoriented economy has improved the quality of life for many Vietnamese.

### Resources

Vietnam has diverse resources, including oil and natural gas deposits. Although its oil production is small by world standards (320,000 barrels per day), it is enough to make oil Vietnam's biggest export earner. The

Spratly Islands are the subject of border disputes because of their valuable oil deposits. Located in the South China Sea, these oil and gas deposits are located near large, energy-consuming countries, and six nations have competing claims for the islands. This dispute could potentially threaten Southeast Asia's long-term stability. China, Vietnam, and Taiwan have claims based on history, while Malaysia, Philippines, and Brunei have claims based on international law. Vietnam has a wide range of other valuable mineral deposits, such as coal, iron ore, aluminum, bauxite, tin, high-quality copper, and low-quality chromite.

Agricultural and forestry products include rice, maize, sweet potatoes, peanuts, soy beans, rubber, lacquer, coffee, tea, tobacco, cotton, coconut, sugar cane, jute, and tropical and subtropical fruit. With 60 percent of Vietnam's population less than 30 years old, a young, well-educated, low-cost labor force is also a valuable resource.



Market

## Industry

Vietnam increased industrial production by 9.4 percent in 2002. The industry sector was 38.7 percent of total output in 2002, and consists of food processing, garments, shoes, machine building, mining, cement, chemical fertilizer, glass, tires, oil, coal, steel, and paper. Even with increases in production, Vietnam's industry lags behind regional competitors, and its improvements are just keeping pace with demand. Rapidly rising demands on infrastructure services also threaten the country's growth potential. Increased foreign direct investment (FDI) and privatization of businesses is helping to industrialize the economy; however, heavy industry is declining, and state-owned enterprises are inefficient and unproductive. A 3-year reform plan passed in 2000 promises more latitude for joint ventures, and new laws on trade licensing and investment. This reform plan will hopefully make business more attractive for foreign capital and investment.



Central Bank in Hanoi



**Boat Operator on Perfume River** 

Vietnam's service sector is also growing, particularly tourism. Recently targeted by the government for improvement, investment is being made into hotels, transportation, and communication. The country hosted 2 million visitors in 2000, most of them from China and Japan. Many small shops are also opening throughout the country as privatization of business increases.

# **Agriculture**

Employing two-thirds of the labor force, agriculture remains key to the Vietnamese economy. Through land reform, and by opening the agricultural sector to market forces, Vietnam has been converted from a food



## Pineapple Farm

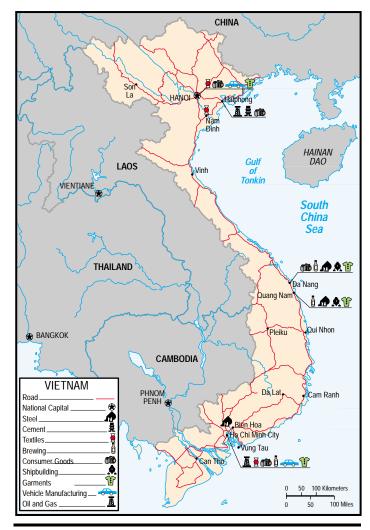
importer to the second-largest coffee producer and third-largest rice exporter in the world. Key exports are coffee, tea, rubber, and fish. Despite a growth of 4.1 percent in 2002, agriculture's share of the economic output has declined significantly (23 percent of total output in 2002) as production in other sectors has risen.

Many rural farmers remain impoverished, victims of cyclical unemployment; they migrate to the cities between harvests. The separation of north and south Vietnam distorted the basic Vietnamese economy by overly stressing regional economic differences. Consequently, the north has been more agriculturally dominated, while the south has focused more on industry.

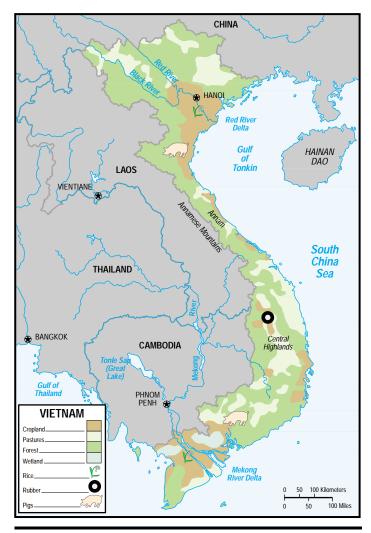
### Utilities

#### Electrical

Vietnam's electrical infrastructure is government controlled, and is inefficient; 20 percent of electrical power is lost before it reaches consum-



Industry



Land Use



Industrial Area Near the Port in Ho Chi Minh City

ers. Per capita consumption of electricity is half the average of low-income countries. The urban population uses over half of the electrical output, while half of the rural population does not have access to electricity. The government has promised electricity for 60 percent of rural households by 2010. Although the achievement of this goal looks unlikely, some progress was made during the 1990s. Power generation nearly tripled. Power cuts are less frequent, and access to electricity has risen from 47 percent of the total population to 75 percent.

Vietnam's per capita overall energy consumption is among the lowest in Asia. In fact, much of Vietnam's large population relies heavily on wood, dung, and rice husks for energy. While expected to remain low in relation to other countries, growth in energy consumption, especially natural gas, is predicted to rise substantially in coming years.

#### Water

To reduce its dependence on hydropower, which supplies 59 percent of its electricity, as well as on plants fired by imported coal, Vietnam

approved construction of a major commercial nuclear power plant in mid-2002. Potential sites for the plant, which would have a capacity between 1,200 and 4,000 MW, are being evaluated.

The production of electricity and water is inefficient; about 30 percent of piped water is lost before it reaches consumers. A lack of competition between service providers, in addition to government restrictions on pricing, limits self-improvements.

The water supplied to most Vietnamese is of poor quality. Treatment is unreliable, and sewage is not well managed. It is not safe to drink water out of a tap, to use it for brushing teeth, to clean food, or for ice.

## Foreign Investment

With investment laws now allowing the establishment of wholly-foreign owned enterprises, investors in the mid-1990s were encouraged by Vietnam's liberalization and tremendous potential, which included oil deposits, mineral and agricultural resources, and well-educated cheap labor. Foreign direct investment (FDI) reached US\$8.3 billion in 1996. Since then, however, investors have become frustrated with endless bureaucracies, corruption, an inefficient legal system, and the Communist Party of Vietnam's reluctance to relinquish control and implement promised economic reforms. This has discouraged new investment, particularly Western. FDI dwindled to US\$1.5 billion in 1999. While the country's leaders, particularly Nong Duc Manh, seem to be dedicated to improving infrastructure, investment, and integration with the rest of Southeast Asia, progress on reforms remains slow.

### Outlook

One party control will most likely limit progress and slow reform, and hinder the country from meeting its growth targets. Other obstacles are weak economic institutions, weak infrastructure, bureaucracies, low salaries, heavy dependence on aid for reconstruction, a growing gap



Floating Restaurant on Thu Bon River

between the rich and poor, and continuing suspicion of southern attitudes of entrepreneurialism and individualism.

# **THREAT**

### Crime

Crime in the cities of Vietnam is typical of other large cities throughout the world. Pocket picking and petty crimes appear to be increasing. Violent crimes, such as armed robbery, are still relatively rare. However, there are reports of criminals using guns, knives, and razors in attempted robberies in Ho Chi Minh City. Travelers are advised to not resist such attempts, and to report them to the police and to the U.S. Embassy in Hanoi, or to the U.S. Consulate in Ho Chi Minh City. Motorcyclists frequently grab bags, cameras, and other valuables from pedestrians, passengers of pedicabs, or passengers of rented motorcycles. Thieves are known to congregate outside of hotels frequented by foreigners. Outlying areas have had reports of assaults. It may be unsafe to hire pedicabs not associated with reputable hotels or restau-

rants, as some drivers have reportedly kidnapped passengers and extorted money. Due to poor visibility from within the pedicab, as well as exposure of belongings, passengers may be prone to theft.

Travelers should keep passports and other valuables in secure locations, such as hotel safes, and should carry a photocopy of the passport at all times. The loss or theft abroad of a U.S. passport should be reported immediately to the local police and the U.S. Embassy in Hanoi or the U.S. Consulate General in Ho Chi Minh City. U.S. citizens must obtain a police report from the local office to apply for a replacement passport and a Vietnamese exit visa. U.S. citizens may refer to the Department of State's pamphlet, *A Safe Trip Abroad*, for ways to promote a trouble-free journey. The pamphlet is available by mail from the Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402, or via the internet at http://www.access.gpo.gov/su\_docs on the Bureau of Consular Affairs home page at http://travel.state.gov/ or at the U.S. Embassy in Hanoi or the U.S. Consulate General in Ho Chi Minh City.

Crimes such as drug trafficking, producing and using fake passports, counterfeit money, terrorism, and cyber-crimes are on the rise.

# **Travel Security**

Foreign visitors may be under surveillance by security personnel. Hotel rooms, telephone conversations, fax transmissions, and e-mail may be monitored, and personal possessions in hotel rooms may be searched. Photographing anything that can be perceived as being of a military or security interest may cause problems with authorities.

Large gatherings, such as those forming at the scene of traffic accidents, can become violent.

Foreign visitors have been arrested, detained or expelled for activities that would not be considered crimes in the United States. Visitors deemed suspicious may be detained; in the past, these have included visitors of Vietnamese decent, visitors involved in politics, visitors possessing political material, visitors conducting business activities that have not

been licensed by appropriate authorities, or visitors conducting unsanctioned religious activities. Traveling close to Vietnamese borders with China, Cambodia, or Laos may also result in detention. These areas as well as others are not always marked, and there are no warnings about prohibited travel. Vietnamese of the opposite sex are not allowed in a visitor's hotel room, and police may raid hotels without notice or consent.

Travelers should exercise caution when visiting locations where alcoholic beverages are prevalent. A number of incidents have been reported in which suspected toxic or unknown substances were used to taint drinks. Purchase of liquor from street vendors should be avoided as the quality of the contents cannot be assured.

U.S. personnel may not be authorized to travel to the central highland areas where minority protests have hindered the ability of the U.S. government to provide assistance to travelers to those areas.

### **Terrorism**

There is still a risk of terrorist action that may target civilians. In locations where Westerners tend to congregate, such as clubs, discos, bars, restaurants, hotels, places of worship, schools, outdoor recreation venues, tourist areas, and beach resorts, travelers should exercise caution.

### Corruption

Corruption continues to dominate the Vietnamese domestic agenda. With the December 2001 arrest of Ho Chi Minh City gang leader Truong Van Cam, embarrassing revelations of collusion between senior government officials and a nationwide crime syndicate were implicated in crimes ranging from murder to drug-running. Central authorities pointed to the revelations as a sign of their determination to eradicate corruption from within the ranks of the government and security forces. Even if the anti-corruption drive is successful, Hanoi will face the additional problem of maintaining the loyalty of its cadres, many of whom rely on corruption as a means of supplementing poor state incomes. In

January 2003, the government announced that state wages would be increased to help counter corruption.

# **Drug Trafficking**

Vietnam does not encourage or facilitate the production, shipment, or distribution of illegal narcotics, and has made combating illegal drugs a high priority. Vietnam has implemented tough drug laws, including the use of the death penalty to deter drug activity. Between 1997 and September 2002, there were 335 death sentences given by Vietnam for drug offenses. At least eight foreign citizens, including one Canadian, have been executed by firing squad in Vietnam for drug offenses since 1995.

United States citizens are subject to Vietnamese laws for offenses committed in Vietnam. Although an agreement with the United States provides for immediate notification of and access to detained citizens within 48 hours, U.S. officials in Vietnam are rarely notified in a timely manner when a U.S. citizen is arrested or detained. This is because Vietnam does not consider the investigatory stage of a criminal case to be covered by this agreement. In Vietnam, the investigatory stage can last up to a year, during which time a suspect can be held without charges, access to a lawyer, or consular notification.

Vietnam has several military and law enforcement organizations with counter-drug responsibilities. The Counter-Narcotics Department is the drug enforcement arm of the Vietnam General Department of Police. The Vietnam Customs Department's narcotics suppression unit conducts drug investigations at airports, seaports, and border crossing points. The Border Defense Force consists of military units that are designated to interdict drug smuggling into Vietnam. However, inadequate resources in manpower, training, transportation, communications, and information systems hamper the efforts of these organizations.

Vietnam is a major drug producing country, with 2,300 hectares of poppies under cultivation, mainly in mountain areas of Lai Chau, Son La, and Nghe An provinces. This cultivation could yield as much as 15 met-

ric tons of opium or 1 metric ton of processed heroin. The majority of this production is likely consumed locally. Despite being a major drug producing country, Vietnam's poppy cultivation is far below that of other regional states. Marijuana is also grown along the Laotian and China border areas and in the Mekong delta. This crop is mainly grown for legitimate commercial uses, such as rope making. Vietnam is also a source of illicit production and trafficking of a safrole, a necessary ingredient in the production of the synthetic psychoactive drug 3,4-methylenedioxymethamphetamine (MDMA), commonly called ecstasy.

The Vietnamese Ministry of Public Health estimates that there are close to 200,000 addicts in the country. A slight majority (56 percent) of drug users live in the cities of Hanoi and Ho Chi Minh. Although opium is the drug of choice, heroin, marijuana, MDMA, and methamphetamine are also consumed by a significant number of users.

## Smuggling and Transshipment

Vietnam is being increasingly used as a transshipment point of illegal drugs produced in the region. According to Vietnamese officials, heroin from Burma and Laos is smuggled overland, or via the Mekong river to Vietnamese port cities. From there, it is shipped overseas, primarily to Hong Kong, Taiwan, the Philippines, and Singapore. A second major route for heroin transiting Vietnam is from China. Vietnam is also a transit country for marijuana from Cambodia, which is generally transported to Ho Chi Minh City for further shipping to the northern provinces of Vietnam before it is smuggled into China. Despite Vietnam's role as a transshipment point, it is believed that major trafficking groups have not yet moved into Vietnam.

### **Major Intelligence Services**

The Vietnamese intelligence community consists of multiple directorates, departments, and agencies, the exact jurisdiction and responsibility of which appear to frequently overlap. The two ministries with major intelligence duties are the Ministry of Public Security and the Ministry

of National Defense. The Ministry of Public Security and its subordinate directorates are responsible for most intelligence, law enforcement, and internal security functions in Vietnam. Some of the Ministry's subordinate departments and directorates with intelligence and law enforcement duties include:

- People's Police Department (PDD) Vietnam's national police. The PDD is primarily responsible for law enforcement in urban areas.
- People's Public Security Forces (PPSF) Responsible for law enforcement and internal security in rural areas.
- People's Public Security Department (PPSD) The PPSD has primary responsibility for internal security.
- Social Order Department-The Social Order Department has principal responsibility for border control.

Each of these directorates has law enforcement and arrest powers.

The Ministry of National Defense is the second ministry with major intelligence duties. Some of its subordinate organizations include:

- People's Army of Vietnam (PAV) The Military Intelligence Department (MID) of the PAV has responsibility for military intelligence and internal security within the armed forces.
- People's Armed Security Force (PASF) The PASF is a paramilitary organization that is primarily responsible for suppressing threatening political activity and insurgents. It also has a role in combating criminal activity.
- Border Defense Command (BDC) The BDC has primary responsibility for border security.

# **Opposition Forces**

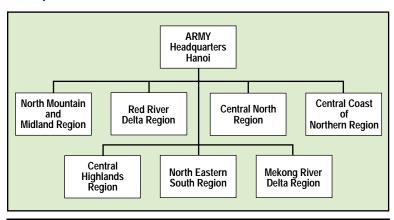
Several anti-government groups are in the southern area of Vietnam. However, there is no organized internal opposition that presents a significant threat to the Vietnamese government. There have been reports of anti-government demonstrations in the central highlands sparked by

government land appropriation policies, immigration of lowland Vietnamese into the area, official corruption, and religious repression. These protests had 4,000 people, and resulted in the government mounting a sizable security effort in the area. Peaceful demonstrations of 10 to 25 people are periodically observed in Hanoi and Ho Chi Minh City.

The most active opposition groups are based overseas. However, these groups are largely ineffective. For example, the Free Vietnam Movement, possibly based in the United States, has been linked to several attempted bombings of overseas Vietnamese government facilities. However, its efforts have been small scale and largely unsuccessful.

### ARMED FORCES

The People's Army of Vietnam (PAVN) consists of four main branches: army, navy, marines, and air force. A coast guard was added in 1998 as a separate command under the navy. The PAVN's role in preserving both stability and socialism was reaffirmed in 2001.



**PAVN Regional Command System** 

The PAVN is the world's ninth-largest army, but often experiences problems with morale. Since the Chinese border threat of 1979, there has been little internal or external threat. In response to internal stability, as well as the end of Soviet aid, the army has been cut by 50 percent since the mid-1980s. In 2001, the defense expenditure was US\$1.8 billion.

In a bid to expand its international contacts, Vietnam has signed a series of bilateral defense cooperation agreements.

# Organization

At the highest levels, Vietnam's command structure strongly resembles the former Soviet Union and the Chinese command structures. The CPV's powerful politburo exercises policy guidance over the state defense bodies, including the Ministry of Defense. Senior defense officials are also party members, and are therefore subject to party discipline and guidance. Although the president is the nominal head of state and commander-in-chief of the armed forces, he holds little real power, and a collective leadership makes the most significant policy decisions.

The military is organized on three levels: main force (and reserves), local (regular forces assigned to districts and provinces), and militia and self-defense (village and urban ward).

# Military Regions

Vietnam is divided geographically into eight military regions and two special military zones. The number of divisions commanded in each region varies by the level of local threat.

## Strategy

Vietnam's strategic doctrine is, of necessity, defensive. During the 1970's, General Giap made a considerable effort to shift Vietnamese doctrinal emphasis from guerilla operations to territorial defense. Its principles are rooted in the political and military strategy *dau tranh* (struggle), which in Vietnamese is a powerful, highly emotional term,



**Military Regions** 

and is a strategy that puts warfare into a distinct conceptual framework. It is frequently referred to in its Vietnamese context as revolutionary war or people's war. Its essence is the idea of people as the chief instruments of war — not merely as combatants, but weapons to be formed, forged and hurled into battle. All Vietnamese people and society, without exception, are to be regarded as weapons of war.

#### Personnel

# Key Defense Personnel

Chief of General Staff/ Deputy Defense Minister Minister of National Defense Chief of Army General Staff Command Chief of Naval Operations Chief of Staff Air Force

Lt. Gen. Phung Quang Thanh Senior Lt. Gen. Pham Van Tra

Lt. Gen. Phung Quang Thanh Rear Admiral Do Xuan Cong Lt. Gen. Nguyen Duc Soat

Vietnam has 484,000 main force personnel on active duty. Component services include the army of 412,000, the navy of 42,000 (including 27,000 marines), and the air force of 30,000 (2002 est). The amount of coast guard personnel remains unknown. Vietnam's reserve force, the Strategic Rear Force, is capable of mobilizing a maximum of 3 to 4 million personnel in the time of war.

Vietnam has a universal military service requirement with a standard term of 2 years. Technical specialists may be required to serve for 3 years. Men and women become eligible for military service at the age of 17. Nearly 1 million men reach military age each year. Since 1989, soldiers have increasingly worked on economic projects, largely in order to raise funds for the impoverished armed forces.

## Training

The Vietnamese Army successfully suppressed anti-government guerillas in Laos, and fought the Chinese-backed Khmer Rouge throughout



#### Vietnamese Soldiers

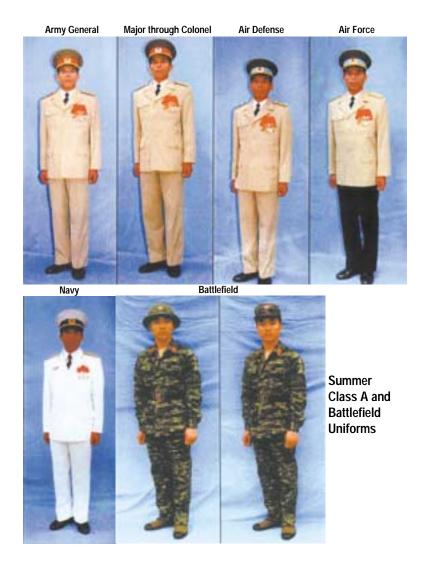
the 13-year Vietnamese occupation of Cambodia. Consequently, it is assumed that the army is well trained and led, possessing a solid core of junior officers and NCOs. However, only limited training has been possible since 1991 because of lack of funds.

### **Uniforms**

Under the new regulations, PAVN officers are distinguished as either line commanders, staff officers, political officers, administrative officers, or military-police officers. New regulations also stipulate the use of unit insignia: bright red for infantry, sky blue for air force, dark blue for navy, green for border defense, and light gray for specialist technicians.

### Outlook

Along with the major reduction of the strength of the PAVN, the military continues to face a lack of modern equipment and well-trained recruits.



Six Su-27 strike fighters were acquired from Russia in 1996; these models are among Russia's most advanced aircraft. Such sophisticated purchases have been rare in recent years, although there is some indication that Hanoi is once again actively exploring the possibility of defense equipment. Its decision to do so has been driven by the Spratly Islands dispute, as well as its dispute with China in the Gulf of Tonkin.

Vietnam has no strategic weapons and is unlikely to be able to afford them in the near future. Whether or not Vietnam decides to develop and build medium and long-range weapons of its own will depend on whether or not it gains the financial means necessary, as well as its relationship with China. If this relationship were to degenerate, then Vietnam may begin to develop strategic weapons. Vietnam holds an unknown number of North Korean Scuds missiles.

### Army

The Vietnamese Army is considered to be a well-trained and effective fighting force whose structure and equipment was impacted by the Soviet Union.

### Mission

The Vietnamese Army is charged with defending national territory, supporting national construction and economic production, and maintaining internal security (with help from the paramilitary).

# Organization

The army is organized into eight military regions and two special military zones, with headquarters in Hanoi, and includes the following:

- 7 Corps headquarters
- 36 Infantry divisions (5 mobile reserve)
- 2+ Independent infantry regiments
- 5+ Independent armor brigades
- 5 Independent armor regiments

- 9 Antiaircraft artillery brigades
- 1 Airborne brigade
- 1 Sapper unit
- 9+ Engineer brigades
- 5 Engineer regiments
- 10 Field artillery brigades
- 2+ Independent field artillery regiments
- 10-16 Construction divisions

NOTE: This organization may not reflect recent reductions in force.

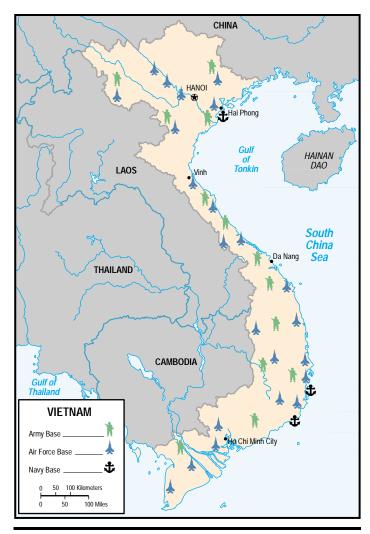
A corps ranges in size from 30,000 to 50,000 troops and normally consists of 4 infantry divisions plus service and support elements. A PAVN infantry division is normally composed of 3 infantry regiments (2,500 men each), 1 artillery regiment, 1 tank battalion, and support elements. A regiment in turn is divided into battalions (600 men each) and the battalion into companies (200 men each).

The strength of the divisions varies enormously, from 5,000 to 12,500 troops, depending on location and state of readiness. A reduction in total military strength may also be affecting strength among field units. The infantry is reinforced by autonomous armored and artillery brigades. In addition to the active members, there exists a paramilitary reserve force that serves as both a tactical rear force and local militia.

Army bases are located at Ban Me Thout, Bien Hoa, Binh Thuy, Cam Ranh Bay, Can Tho, Da Nang, Dien Bien Phu, Haiphong, Hue, Khe Sanh, Kontum, Lang Son, Pleiku, and Quang Tri. Haiphong and Dien Bien Phu are the only bases in what was North Vietnam that have sizeable deployments of personnel.

### Personnel

The Vietnamese Army has 412,000 personnel. The army also maintains a massive strategic rear force reserve (3 to 4million estimated person-



**Military Bases** 

nel). The army helps the government by employing male citizens; in this sense, it is as much of a social service as it is a fighting force. However, over-staffing has created low morale.

There are many troops deployed on Vietnam's northern border facing China, and several garrisons deployed in the Spratly Islands. There are internal security forces deployed in the southern sector where several anti-government groups operate.

# Training

There is limited training due to a lack of funds and modern equipment. However, the typical Vietnamese soldier is very capable, largely due to combat experience in recent years with the United States, Cambodia, and China (1979).

# Capabilities

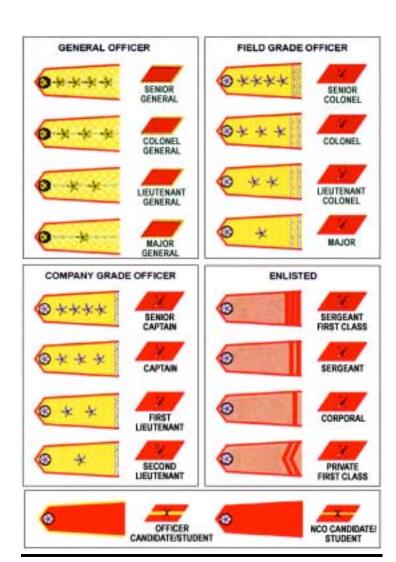
Operational readiness has suffered due to the growing shortage of spare parts and poor maintenance.

## **Equipment**

One of the major weaknesses of the Vietnamese Army is a lack of modern equipment. Much of their equipment, particularly that of U.S. origin, is non-operational due to lack of spare parts or maintenance. Vietnam does not have its own arms industry and must import all of its equipment.

#### Armor

Type	Role	Quantity
T-34/85	Main Battle Tank	50
T-54/55	Main Battle Tank	800
T-62	Main Battle Tank	60
T-59	Main Battle Tank	350
Type 63	Light Tank	90
PT-76	Light Tank	300
BRDM-2	Reconnaissance Vehicle	90
BMP-1	Infantry Fighting Vehicle	300



Army Insignia

## BRANCH INSIGNIA



# RANK/BRANCH INSIGNIA (FIELD UNIFORMS)



**Army Collar Tabs** 

Type	Role	Quantity
BTR-40, 50, 60	Armored Personnel Carrier	400
BTR-152	Armored Personnel Carrier	50
Type YW531	Armored Personnel Carrier	150
M113	Armored Personnel Carrier	80

# Artillery

Type	Role	Quantity
203-mm M110	Self-propelled Howitzer	25
155-mm M109	Self-propelled Howitzer	50
155-mm M114	Howitzer	n/a
152-mm M1937/ML-20	Howitzer	n/a
152-mm D-1	Howitzer	n/a
152-mm Type 66	Gun-howitzer	n/a
152-mm D-20	Gun- howitzer	n/a
130-mm M46	Field Gun	n/a
130-mm Type 59-1	Field Gun	n/a
122-mm D-30	Howitzer	150
122-mm M1938/M-30	Howitzer	400
122-mm D-74	Field Gun	n/a
122-mm Type 54	Field Gun	60
122-mm Type 60	Field Gun	n/a
120-mm 2S9	Self-propelled Gun	30
105-mm M101/102	Howitzer	500
100-mm M1944/BS-3	Field Gun	n/a
85-mm Type 56	Field Gun	60
76-mm M1942/ZIS-3	Field Gun	120
SU-100	Self-propelled Gun	100
SU-85	Self-propelled Gun	100
140-mm BM-14-16	Multiple Rocket System	n/a
130-mm Type 63	Multiple Rocket System	n/a
122-mm BM-21	Multiple Rocket System	n/a
107-mm Type 63	Multiple Rocket System	n/a
160-mm MT-13	Mortar	n/a

Type	Role	Quantity
120-mm Type 55	Mortar	n/a
107-mm M30	Mortar	n/a
82-mm Type 53/67	Mortar	n/a
60 mm Type 63	Mortar	n/a

## **Infantry Weapons**

Type	Role	Quantity
7.62 mm Tokarev	Pistol	n/a
7.62 mm Type 68	Pistol	n/a
7.62 mm SKS	Rifle	n/a
7.62 mm Type 56	Rifle	n/a
7.62 mm AK-47	Assault Rifle	n/a
7.62 mm AKM	Assault Rifle	n/a
7.62 mm K-50M	Submachinegun	n/a
7.62 mm MAT-49	Submachinegun	n/a
7.62 mm PPSh-41	Submachinegun	n/a
7.62 mm Type 53/67	Light Machinegun	n/a
7.62 mm DPM/RPD	Light Machinegun	n/a
7.62 mm SGM	Medium Machinegun	n/a
12.7 mm DShK	Heavy Machinegun	n/a

## Antitank

Type	Role	Quantity	In Service
9K11/9M14 (AT-3)	ATGM	n/a	n/a
85-mm D-48	Anti-Tank Gun	100	100
82-mm B-10/Type 65	Recoilless Rifle	n/a	n/a
RPG-2/7 series	RPG	500	500

## Air Force

In 1999, The Vietnam People's Army merged its air force, which was responsible for airfield protection and flying and maintaining aircraft, with

## **BRANCH INSIGNIA**



### Air Force and Navy Collar Tabs

the air defense force, which had overseen surface-to-air missiles and anti-aircraft guns.

### Mission

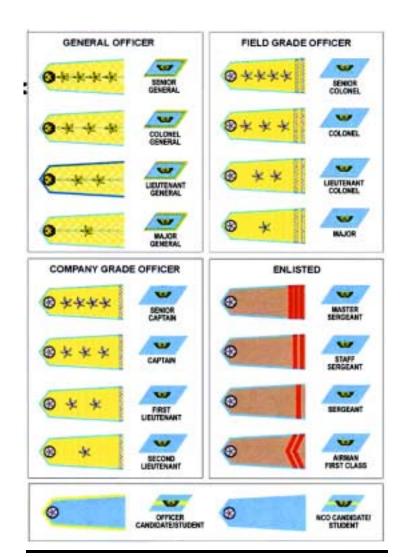
The Vietnamese Air Force is now larger than it was at the height of the Vietnam-U.S. war. However, the low serviceability of equipment, combined with a low morale among the troops has weakened combat effectiveness. Non-availability of spare parts greatly reduces flight time. Many aircraft are now grounded, and most squadrons fly older-model aircraft.

# Organization

The air force is based around three operational front-line divisions, with nine fighter and ground-attack squadrons. There are also two transport and helicopter squadrons.

# **Equipment**

The Vietnamese Air Force inventory is formidable by Asian standards. However, many of its aircraft are old and outdated. Most equipment is



Air Force Insignia

Soviet. Some of their aircraft are U.S. models that were captured during the Vietnam War, though few, if any are believed to be operational.

### **Inventory**

## **Rotary Aircraft**

Type	Role	Quantity
Mi-24	Attack Helo	30
Mi-6	Heavy Lift Helo	10
Mi-8/17	Med Trans Helo	50
Ka-25BSH	ASW Helo	17

## **Air Defense Systems**

Type	Role	Quantity
GUIDELINE (SA-2)	Medium-High Alt. SAM	n/a
GOA (SA-3)	Low-Medium Alt. SAM	n/a
Strela-1 (SA-9)	Low-Altitude SAM	500
57-mm ZSU-57-2 Twin	Self-propelled AAG	100
57-mm S-60	Antiaircraft Gun	100
40-mm M42 Twin	Self propelled AAG	n/a
37-mm M1939	Antiaircraft Gun	250
37-mm Type 65	Self propelled AAG	n/a
30-mm M53	Antiaircraft Gun	500
23-mm ZSU-23-4 Quad	Self-propelled AAG	100
23-mm ZU-23	Light AAG	1,000
14.5-mm ZPU	Light AAG	1,000
14.5-mm Russian ZGU-1	Mountain Pack AAG	n/a
12.7-mm M53	Light AAG	500
12.7-mm DShK M38/46	Heavy AAG	n/a

# Navy

In May of 2002, Moscow returned the naval base at Cam Ranh Bay to Vietnam. Once, it was the largest Soviet base outside of the Warsaw Pact, and before that, it served as a base for U.S. naval forces.

## Capabilities

As disputes continue in the South China Sea over the Spratly Islands, there has been an increase in defense spending on the Navy.

#### Personnel

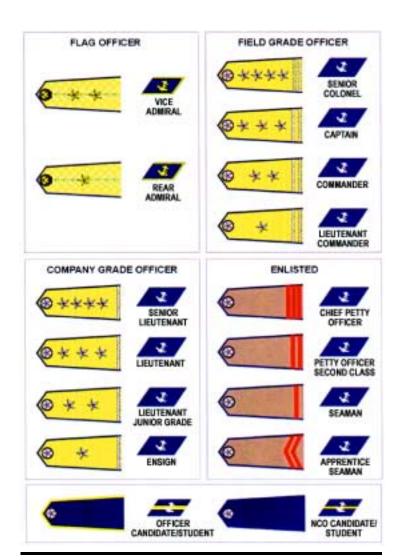
The Vietnamese Navy has a total strength of 39,000, consisting of 9,000 regulars, 3,000 conscripts who serve a 3 to 4 year term, and a 27,000-member naval infantry.

# **Equipment**

Maritime practices are poor, and spare parts are in short supply. Many ships can lay only tentative claims to operational availability. The favorable relationship that began with Russia during the Cold War is still regarded as necessary, but not vital; the fact that most military equipment is Soviet in design necessitates at least a trading relationship. The navy has a large number of patrol and coastal combatants, including torpedo and missile craft.

### **Inventory**

Туре	Role	Quantity
PETYA Class	Frigate	5
SAVAGE Class	Frigate/Training	1
BARNEGAT Class	Frigate	1
ADMIRABLE Class	Corvette	2
OSA II Class	Fast Attack-Missile	8
TARANTUL I	Fast Attack-Missile	2
SHERSHEN Class	Fast Attack-Torpedo	16
TURYA Class	Fast Attack-Torpedo	5
SO 1 Class	Large Patrol Craft	8
PO 2 Class	Coastal Patrol Craft	2
PGM 71 Class	Large Patrol Craft	3



# Navy Insignia

ZHUK Class	Fast Attack/Patrol	11
POLUCHAT Class	Coastal Patrol Craft	2
POLNOCHNY Class	Landing Ship Merchant	3
1-510 Class	Landing Ship Tank	2
511-1152 Class	Landing Ship Tank	2
T 4 Class	Landing Ship Utility	12
Various Ex-U.S.	Landing Craft	24
LIENYUN Class	Minesweeper-Coastal	2
YURKA Class	Minesweeper-Ocean	2
SONYA Class	Coastal Minewarfare	4
YEVGENYA Class	Minehunter-Inshore	2
K 8 Class	Mine Sweeping Boat	5
KAMENKA Class	Survey Ship	1
EX-SOVIET	Floating Docks	2
SL Class	Transport	12
Ex-Chinese	Tankers	4

# Marine/Naval Infantry Forces

#### Mission

The Vietnamese marines, or Naval Infantry, was established in 1954 to provide a mobile combat force of joint service operations to defend the mainland coastal areas and holdings. The naval infantry has a broad mission including landings, island defense, demolition of enemy vessels, ports, bridges, barracks, command posts, and special missions.

### Organization

The naval infantry is organized into brigades, and is modeled after the former Soviet Naval Infantry Regiment. The naval infantry is a subordinate command of the Vietnamese Navy, and is commanded by the Commander of the Naval Forces.

Vietnam is organized into four naval operating zones. They are:

■ 1st Naval Zone: Gulf of Tonkin area

■ 2nd Naval Zone: South China Sea/Paracel Islands

■ 3rd Naval Zone: Cam Ranh Bay/Spratly Islands

■ 4th Naval Zone: Indian Ocean

Naval bases are the following (marines are not necessarily located at each base):

Cam Ranh Bay	Ha Tou	Quang Khe
Can Tho	Haiphong	Qui Nhon
Chu Hai	Hanoi (HQ)	Vinh Long
D 11	**	

Da Nang Hue

#### Personnel

The Vietnamese Naval Infantry has 27,000 Marines, who are organized into 10 brigades.

# Training

There is limited training because of the navy's lack of funds. The naval infantry is trained in amphibious and commando operations.

# Capabilities

The naval infantry is the main force in the current Vietnamese occupation of Spratly Islands. Islands in the Spratlys group occupied by the Vietnamese include: Southwest Cay, Petley Reef, Namyit, Great Discovery Reef, Sin Cowe, Collins Reef, Sand Cay, West Reef, East Reef, Central Reef, Pearson Reef, Allson Reef, Cornwallis Reef, Ladd Reef, Barque Canada Reef, Amboyna Cay, and Spratly Island.

### **Uniforms**

The Vietnamese Naval Infantry shares its uniforms with the navy.



**Marine Corps Training** 

# **Equipment**

The Vietnamese Naval Infantry is equipped with amphibious tanks, armored vehicles, air defense artillery of different calibers, guns, cannons, mortars, and magnetic mines. Most equipment is from the former Soviet Union or is previous U.S. equipment.

### **Coast Guard**

The coast guard was formed in 1998 as a separate command under the Vietnamese Navy.

#### Mission

The coast guard seeks to help maintain maritime security and law enforcement along with the Marine Police and the Vietnamese Navy. Its mission is to provide security, safety, and order in Vietnamese waters – including the Vietnamese territorial sea, contiguous zone, continental shelf, and exclusive economic zone. Operationally, this includes controlling the sea, defending Vietnamese sovereignty in maritime zones, protecting safety and property at sea, preserving marine resources and environmental rights, and providing overall security and order at sea.

## Organization

The coast guard is part of the Ministry of Defense, and answers to naval leadership. It is distinct from the navy, operating independently of the naval chain of command. The coast guard has the authority to enforce Vietnamese laws and regulations in Vietnamese waters, and the ability to enforce any international treaties of which Vietnam is party.

Although its individual role and mission is clear, the new organization has not yet fully assumed its range of operational responsibilities, and Vietnamese Navy remains the preeminent Vietnamese maritime law enforcement organization. The coast guard's creation is meant to enable the Vietnamese Navy to pursue more militaristic objectives. Its resources and assets are unclear.

### Personnel

The assets and personnel of the coast guard are organized into zones similar to those used by the navy. Ships are stationed in Vietnamese Navy ports. This organization is done to promote cooperation and coordination with the Vietnamese Navy.

# Paramilitary, Militia/Self-Defense Forces

There are two principle paramilitary organizations under the Ministry of National Defense: the Border Defense Guards and the People's Militia/Self Defense Forces (PM/SDF).

Vietnam's pervasive security forces permeate throughout all tiers of society and are primarily concerned with suppressing subversive antistate activity. The primary arm is the quasi-military, rurally based People's Armed Security Force.

#### Mission

The force has four functions, which are to:

- Defend its local territory in wartime and delay, not to halt, the enemy.
- Support PAVN regular units in combat.
- Maintain local security in peace and in wartime.
- Engage in economic activity, chiefly food production and road-building.

# Organization

The paramilitary forces report to the Ministry of the Interior. Cadres are organized into both static and mobile combat units of platoon strength. The forces also act as a military reserve.

#### Personnel

Total security forces are 4 to 5 million strong, with personnel from both urban and rural areas. All men aged 18 to 45 and women aged 18 to 40 are obligated to join the self-defense militia force. PAVN strategists make a doctrinal distinction between the regular force, which would use conventional tactics to repel an invasion, and the paramilitary force, which would employ guerilla tactics in a local people's warfare.

### Capabilities

Most units are lightly armed with mortars and some small-caliber artillery.

### **National Police**

The national police consists of the urban People's Security Force (PSF – also known as the People's Police) and the rural/village People's Public

Security Service (PPSF – also known as People's Security Service), and a plain clothes, secret police force.

#### Mission

Their role corresponds less with combating law-breakers and more with upholding party doctrine.

### Organization

These forces report to the Ministry of the Interior.

### Personnel

The total strength of the national police force is 40,000.

#### **Border Defense Force**

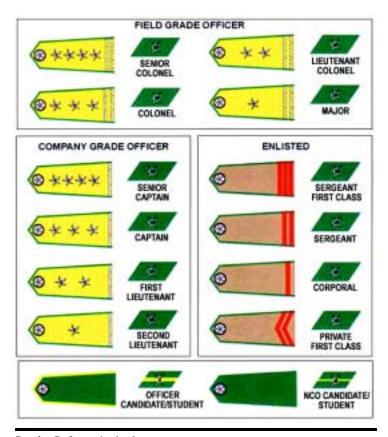
The Border Defense Force (BDF) is part of the paramilitary and has 40,000 personnel (2001 est). It now operates under the Ministry of Defense, after being moved in 1996 from the Ministry of the Interior. It is responsible for protection of Vietnam's lengthy interior borders and coastal border areas.

#### Marine Police

The Marine Police were created in 1998 to help the coast guard and the navy maintain maritime security and law enforcement.

The presidential decree that created the Marine Police states that all organizations, individuals, and means of transport operating in territorial waters from Vietnam's baseline to the nearshore boundary of its exclusive economic zone must be checked, and are subject to the control of the Marine Police. It is the mission of the Marine Police to ensure security, order, and compliance of all parties with Vietnamese law and international treaties to which Vietnam is a party.

Although its individual role and mission is clear, the new organization has not yet fully assumed its range of operational responsibilities, and



# **Border Defense Insignia**

the navy remains the preeminent Vietnamese maritime law enforcement organization. The Marine Police's creation is meant to enable the Vietnamese Navy to pursue more militaristic objectives.

The government expects that the new organization will be the primary body responsible for search and rescue operations. The Marine Police are also expected to assume a role in the government's policy to further develop the sea economy.

# **Weapons of Mass Destruction**

Vietnam has no nuclear, biological, or chemical weapons. It has signed the 1972 Non-Proliferation Treaty (which prohibits the development of nuclear weapons), the 1979 Biological Weapons Convention (which prohibits biological weapons development), and the 1931 Geneva Protocol (which bans the use of asphyxiating, poisonous, or other gases).

# **APPENDIX A:**

# **Equipment Recognition**

## **INFANTRY WEAPONS**

## 7.62-mm Tokarev



Effective Range
Caliber
System of Operation
Overall Length
Feed Device
Weight

40 m 7.62 x 25-mm Short recoil, semiautomatic 196 mm 8-round box magazine 846 g

# 7.62-mm SKS/Type 56



Caliber7.62 x 39-mmSystem of OperationGas, semiautomatic

Effective Range 400 m

Feed 10-rd internal magazine

Weight (Empty) 3.85 kg Overall Length 1.025 m

# 7.62-mm AK-47/AKM



**Maximum Effective Range** 

Caliber

**System of Operation** 

Rate of Fire Overall Length

**Magazine Capacity** 

Weight (Loaded)

400 m

7.62 x 39-mm

Gas, selective-fire

Cyclic, 600 rds/min

880 mm

30-rd detachable box magazine

4.3 kg

### 7.62-mm K-50M



Caliber 7.62-mm **Effective Range** 100 m Cyclic Rate of Fire 900 rds/min

**System of Operation** Blowback, selective fire (auto and semiauto)

Overall Length 755.7 mm

Feed Device 35-rd box magazine

Weight (Empty) 3.6 kg

**NOTE:** Modified Chinese Type 50; this model is an attempt to modernize the Soviet WWII-era PPSH-41.

#### 9/7.62-mm MAT-49



Caliber 9- and 7.62-mm Effective Range 200 m

Cyclic Rate of Fire 600-650 rds/min
System of Operation Blowback, automatic

Overall Length 757 mm

Feed Device 32-rd detachable box magazine

Weight (Empty) 4.17 kg

**NOTE:** Vietnam has fitted some of its 9-mm MAT-49 submachine guns with longer barrels and new magazines that can fire the Soviet 7.62-mm cartridge. They are distinguished by the letter "K" stamped on the reciever and the magazine of the modified model.

#### 7.62-mm PPSh-41



Caliber7.62-mmEffective Range300 mCyclic Rate of Fire900 rds/min

System of Operation Blowback, selective fire (auto and semiauto)

Overall Length 840 mm

Feed Device 35-rd box magazine; 71-rd drum

Weight (Empty) 4.42 kg

# 7.62-mm Type 53/67



Caliber 7.62-mm Effective Range 800 m

Cyclic Rate of Fire 650 rds/min (300 rds/min practical)

System of Operation Gas; automatic

Feed Device 203-rd metal belt in magazine box,

or 50-rd magazine

Overall Length 1.25 m
Weight (Without Bipod or Tripod) 10 kg
NOTE: The Tpye 67 is a Modified Chinese Type 53.

#### 7.62-mm RPD



Caliber7.62 x 39-mmSystem of OperationGas, automatic

Feed 100-rd disintegrating link belt in drum

Max Effective Range 800 m

Rate of Fire Cyclic, 700 rds/min

Overall Length 1.036 m Weight (Empty) 7.1 kg

# 7.62-mm SGM



1,000 m

7.62 x 54-mm

Gas, automatic 250-rd pocketed belt

Maximum Effective Range Caliber

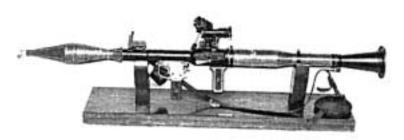
System of Operation Feed

Rate of Fire Cyclic, 650 rds/min
Overall Length 1.12 mm

Overall Length1.12 mmWeight (Empty)13.6 kg

### **ANTITANK**

## RPG-7



Maximum Effective Range1,700 mCaliber30-mmOverall Length1.1 m

### 85-mm D-48



 Crew
 6

 Length (Travelling)
 8.717 m

 Barrel Length
 6.49 m

 Combat Weight
 2,350 kg

 Max Range
 18,970 m

Rate of Fire Max: 15 rds/min; Normal: 8-9 rds/min

#### **ARMOR**

### T-34/85 Main Battle Tank



Crew 3

Armament 1 x 125-mm gun w/42 rds 1 x 7.62-mm coaxial MG

1 x 7.62-mm coaxial MG 1 x 12.7-mm AA MG

Maximum Speed65 km/hMaximum Range600 km

Combat Weight 42,500 kg

Length 10.42 m (gun fwd)

 Width
 3.4 m

 Height
 2.2 m

Night Vision Yes
NBC Yes

Fording 1.4 m Gradient 60% Vertical Obstacle 0.8 m

Trench 2.7 m

#### T-54/55 Main Battle Tank



Crew

1 x 100-mm D10T2S gun w/43-rds; 1 x 7.62-mm SMGT coaxial w/3,500-rds; Armament

1 x 12 -7-mm DShK antiaircraft w/500-rds

**Maximum Speed** 50 km/h

**Maximum Range** 460 km (650 km w/long range tanks)

**Fuel Capacity** 960 liters **Combat Weight** 36,000 kg Length 9 m Width 3.76 m Height 3.03 m

**Night Vision** Yes NBC Yes Fording 1.4 -m

Gradient 60% Vertical Obstacle 0.8 m 2.7 m Trench

#### T-62 Main Battle Tank



Crew 4

Armament Main: 115-mm smoothbore: max effective range 2,000 m

Coaxial: 7.62-mm PKT MG

Antiaircraft: 12.7-mm DShKM MG

Max Speed 50 km/h

Fuel Capacity Internal: 675 liters; External: 285 liters; Aux: 400 liters

Range 450 km (with additional fuel tanks: 650 km)

**NBC System** Yes **Night Vision** Yes Fording 1.4 m Gradient 60% Vertical Obstacle  $0.8 \, \text{m}$ Trench 2.85 m 40,000 kg Weight Length 6.6 m Height 2.4 m

Type-63 Light Amphibious Tank



Crew Armament

Turret Traverse
Maximum Speed
Maximum Range
Fuel Capacity
Combat Weight
Night Vision
NBC
Fording

Gradient Vertical Obstacle

Trench

4

Main: 85-mm rifled gun Coaxial: 7.62-mm coaxial MG Antiaircraft 12.7-mm MG

360°

Road: 64 km/h; Water: 12 km/h

370 km 403 liters 18,400 kg No No Amphibiou

Amphibious 60% 0.87 m 2.9 m

# PT-76 Light Tank



3 Crew

Armament

Main: 76-mm D-56T gun w/40 rds Coaxial: 7.62-mm SGMT MG w/1,000 rds

**Maximum Speed** 44 km/h Maximum Range 394 km **Fuel Capacity** 250 liters **Combat Weight** 14,600 kg Length 7.66 m Width 3.17 m Height 2,25 m **Night Vision** Yes NBC Yes

Fording **Amphibious** 

Gradient 60% Vertical Obstacle 1.1 m Trench 2.8 m

### **BRDM-2 Reconnaissance Vehicle**



Crew/Passengers 4 Type 4 x 4

Armament Main: 14.5-mm KPVT w/500 rds Coaxial: 7.62-mm PKT w/2,000 rds

Maximum SpeedRoad: 100 km/h; Water: 10 km/hMaximum Range750 km

Fuel Capacity 290 liters
Combat Weight 7,000 kg
Length 5.75 m
Width 2.35 m
Height 2.31 m
Night Vision Yes
NBC Yes

Fording Amphibious

Gradient 60% Vertical Obstacle 0.4 m

**BMP-1 Infantry Fighting Vehicle** 



Crew 3 (6-8 passengers)

**Armament** Main: 73-mm smoothbore cannon, 40 rds

Coaxial: 7.62-mm PKT MG

Other: Launcher rail for AT-3 SAGGER ATGM

Max Speed Road: 80 km/h; Water: 6-8 km/h

Fuel Capacity460 litersRange550-600 kmFordingAmphibious

Gradient 60%
Vertical Obstacle 0.8 m
Trench 2.2 m
NBC Yes
Night Vision Yes

 Combat Weight
 13,500 kg

 Length
 6.7 m

 Width
 2.9 m

 Height
 2.2 m

#### **BTR-60**



Crew 2 + 20 passengers

Armament Main: 4.5-mm KPVT MG

Coaxial: 7.62-mm PKT MG Road: 45 km/h: Water: 10 km/h

Max Speed Road: 45 km/h; Water: 10 Fuel Capacity 290 liters

Range 500 km Fording Amphibious

 $\begin{tabular}{lll} Gradient & 60\% \\ Vertical Obstacle & 0.4 m \\ Trench & 2 m \\ NBC & Yes \\ \end{tabular}$ 

Night Vision Yes Combat Weight 10,300 kg Length 7.3 m

 Width
 3.1 m

 Height
 1.9 m

NOTE: Vietnam's inventory also includes BTR 40s and BTR 50s.

# M113



Crew/Passengers 2 + 11 Type Tracked

Armament 1 x 12.7-mm AA MG

**Maximum Speed** 58 km/h Maximum Range 480 km **Fuel Capacity** 360 liters **Combat Weight** 12,094 kg Length 4.92 m Width 3.11 m 2.52 m Height **Night Vision** Yes NBC Yes

Fording Amphibious

BTR-152 Wheeled Armored Personnel Carrier



 Crew
 1 + 18 passengers

 Armament
 Main: 12.7-mm DShK

 Other: 7.62-mm SGMB

**Maximum Speed** 75 km/h **Fuel Capacity** 300 liters Maximum Range 600 km Fording 0.8 m Gradient 55% **Vertical Obstacle** 0.6 m Trench 0.69 m NBC No **Night Vision** No Length 6.55 m Width 2.32 m Height 2.36 m **Combat Weight** 8,950 kg

### Norinco YW531 APC



Crew/Passengers 4+10 Type Tracked

Armament 12.7-mm AA MG

Maximum Speed Road: 66 km/h; Water: 6 km/h

No

 Maximum Range
 500 km

 Fuel Capacity
 450 liters

 Combat Weight
 12,600 kg

 Length
 5.476 m

 Width
 2.978 m

 Height
 2.85 m

 Night Vision
 No

Fording Amphibious

NBC

**NOTE:** Above model is shown with 4 Chinese Red Arrow ATGWs, which are not standard on Vietnam's APCs.

### **ARTILLERY**

### 203-mm M110A



Crew 9 Caliber 20

 $\begin{array}{ll} \textbf{Caliber} & 203\text{-mm} \\ \textbf{Maximum Speed} & 54 \text{ km/h} \end{array}$ 

Firing Range 12,000 m; (extended range 30,000 m)
Rate of Fire Burst: 2 rds/min; sustained: 1 rd/min

 Combat Weight
 28,350 kg

 Fording
 1.066 m

 Gradient
 60%

 NBC
 No

 Night Vision
 Yes

### 155-mm M109



Crew

Caliber155 mm/45ConfigurationTrackedMax Speed56.3 km/h

**Armament** Main: 155 mm Howitzer

Antiaircraft: 12.7 mm or 7.62 mm MG

Max Range30,000 mMax Rate of Fire3 rds/minFuel Capacity511 litersVerticle Obstacle0.53 mTrench1.83 mCombat Weight24,948 kgNBC SystemNo

NBC System No Night vision Yes

# 155-mm M114



Crew 11 Maximum Range 14,600 m Rate of Fire 40 rds/h **Combat Weight** 5,760 kg 7.315 m Length Width 2.438 m Height 1.803 m Prime Mover 6 x 6

# 152-mm D-20



Crew 10

Maximum Range Conventional: 17,410 m; RAP: 24,000 m

 Rate of Fire
 6 rds/min

 Combat Weight
 5,700 m

 Length
 8.69 m

 Width
 2.40 m

 Height
 1.92 m

 Prime Mover
 6 x 6 truck

### 130-mm M-46 Towed



Crew 8 Barrel Length 7.6 m

Weight 8,450 kg (traveling); 7,700 kg (firing)

Length 11.73 m (traveling)
Width 2.45 m (traveling)
Height 2.55 m (traveling)

Max Range27,150 mRate of Fire5-6 rds/min

# 122-mm D-30 Towed



Crew 10 **Combat Weight** 3,210 kg Length 8.7 m Width 2.4 m 2.5 m Height Max Range 17,200 m Sustained Rate of Fire 2 rds/min **Prime Mover** Heavy 6 x 6 truck

### 122-mm M1938/M-30 Howitzer



 Crew
 8

 Barrel Length
 2.8 m

 Weight
 2,450 kg

 Length
 5.9 m (traveling)

 Width
 1.975 m (traveling)

 Height
 1.71 m (traveling)

Max Range11,800 mEffective HEAT Range630 mRate of Fire5-6 rds/minElevation+63.5Traverse49°

# 122-mm Type 54



 Crew
 5

 Weight
 2,500 kg

 Length
 6.03 m

 Width
 3.86 m

 Height
 1.93 m

 Range
 11,800 m

 Rate of Fire
 3 rds/min

 Emplacement Time
 1-2 mins

### 122-mm D-74 Towed Field Gun



 Crew
 6-8

 Combat Weight
 5,150 kg

 Range
 23,900 m

 Ammunition
 HE

**NOTE:** Limited standard general-support weapon. It may be confused with the D-20 or M84 since they share a common carriage. The only recognizable difference is in the length/diameter of the cannon tube.

### 120-mm 2S9 Anona-S



Role Self propelled combination gun

Crew

Armament

1 x 120-mm gun Maximum Range: 8,855 (standard) 13,000 m (RAP) Rate of Fire: 6 - 8 rds/min

Maximum Speed 60 km/h Maximum Range 500 km **Combat Weight** 8,700 kg Length 6.02 m Width 2.63 m

2.3 m (max ground clearance) 1.9 m (firing configuration) Height

Fording **Amphibious** 

Gradient 60% NBC Yes **Night Vision** Yes

# 105-mm M101



 Crew
 8

 Maximum Range
 11,270 m

 Rate of Fire
 10 rds/min

 Combat Weight
 2,030 kg

 Length
 5.991 m

 Width
 3.65 m

 Height
 1.574 m

 Prime Mover
 6 x 6

# 105-mm M102



8 Crew Maximum Range 15,100 m Rate of Fire 10 rds/min **Combat Weight** 1,496 kg Length 5.18 m Width 1.96 m 1.594 m Height Prime Mover 6 x 6

# 85-mm Type 56



Type Towed antitank gun

Crew 6-8
Caliber 85-mm

Max Effective Range 15,650 (HEAT: 970)
Rate of Fire 15-20 rds/min

Elevation -7 to 35° Traverse 54°

 Weight
 1,750 kg

 Height
 1.42 m

 Length
 8.34 m

### 100-mm SU-100



Role Self-propelled antitank gun

Crew 4

Firing Range 1,500 m

Maximum Rate of Fire 8 rds/min; (sustained: 5 rds/min)

Maximum Road Speed 55 km/h

Maximum Road Range 320 km (425 with auxilliary fuel tanks)

 Length
 6.1 m

 Width
 2.98 m

 Height
 2.28 m

# 107-mm Type 63 MRL



 Crew
 7

 Armament
 12 x 107-mm rockets

 Rate of fire:
 16 rds/9.5 sec

 Maximum range:
 11,000 m

 Combat Weight
 6,887 kg

 Length
 6.65 m

 Height
 2.43 m

#### 122-mm BM-21



 Crew
 6

 Combat Weight
 13,700 kg

 Length
 7.4 m

 Width
 2.7 m

 Height
 2.9 m

 Max Speed
 75 km/h

 Max Range
 20,500 m

**Armament** Smoke, HE, HE-CF

**Note:** Mounted on URAL-375D 6x6 chassis; 40 tubes arranged in 4 banks of 10 tubes each; has a distinctive rear fender design; carries a spare tire at the rear of the cab; troop seats forward of the rear wheels; blast shields not fitted as on other MRLs; exhaust and muffler mounted under front bumper; pallet and mount tarped in transit.

# 120-mm M-43 Mortar



Crew 6 **Maximum Range** 5,700 m Rate of Fire 15 rds/min **Combat Weight** 280 kg Length 1.854 m Width 1.62 m Height 1.206 m **Bomb Weight** 15.4 kg

# 60-mm M19



Crew Feed Length of Barrel Weight Rate of Fire

2 Muzzle loaded 819 m 21.03 kg (complete) Max: 30 rds/min: indef: 8 rds/min

# 81-mm M29



Crew Feed Length of Barrel Elevation 2 Muzzle loaded 1.295 m 800-1,500 mils

#### **AIR DEFENSE**

#### 12.7-mm DShK Model 38/46



**Maximum Effective Range** 

Caliber

**System of Operation** 

**Overall Length** 

Feed

Weight (empty)

1,500 m

12.7 x 108-mm

Gas, automatic

1.588 m

50-rd metallic link belt

35.7 kg

**USING THE DSHK:** (1) Push forward feed latch located at top rear of feed cover and lift cover. (2) Place belt on revolving block so first round can be put in the upper recess of feed block. (3) Hold free end of belt w/right hand and press feed belt against revolving block. (3) Rapidly rotate block w/belt as far to the right as possible. (4) Close cover, Pull operating handle to rear until slide is engaged. WEAPON IS READY TO

FIRE. (5) Hold both spade grips and depress trigger.

#### ZSU-23-4



 Crew
 4

 Combat Weight
 20,500 kg

 Length
 6.5 m

 Width
 3.0 m

 Height
 2.3 m

 Max Speed
 65 km/h

 Max Range
 2,500 m

Armament 4 x 23-mm water-cooled AZP-23 cannon

**NOTE:** 6 pressed road wheels - no return rollers; low rectangular turret with side bulges; four 23-mm guns mounted in front of turret; folding circular GUN DISH fire control/acquisition radar mounted at rear of turret.

# **SA-6 GAINFUL**



Range 25 km

Warhead 59 kg HE frag

Guidance Command and semi-active radar

Length5.9 mBody Diameter0.34 mLaunch Weight600 kgPropulsionRamjet

# **SA-7 STRELA**



 Crew
 1

 Maximum Range
 3,200 m

 Combat Weight
 9.15 kg

 Length
 1.49 m

# SA-9 Gaskin



Type
Guidance
Maximum Range
Maximum Altitude
Launch Weight
Length

Low altitude surface to air missile system Passive IR homing seeker 4,200 m 3,500 m

30 - 30.5 kg 1.803 m

#### **SA-16 GIMLET**



Role Low-altitude surface-to-air missile system
Type Man-portable, single-round, two-stage
Guidance Passive IR homing Fm tracking logic seeker
Warhead 1.27 kg HE chemical energy fragmentation
w/contact fuzing circuit

Maximum Range Approaching target: 4,500 m; Receding target: 5,200 m

**System Deployment Time** Up to 13 seconds Re-fire Up to 5 times

Combat Weight 16.65 kg Length 1.7 m

### 57-mm S-60



**Combat Weight** 4,773 kg Caliber 57 x 348-mm Rate of fire 105 to 120 rds/min

Tactical AA range 6.000 m

Optical mechanical computing sight or FLAP WHEEL FCS or FIRE CAN radar Fire control

**Azimuth limits** Unlimited **Elevation limits** -4 to 870

#### 40-mm M42 SPAAG



Crew 6

Armament

 Main
 2 x 40-mm cannon M2A1

 Secondary
 1 x 7.62-mm M1919A4 MG

**Turret Traverse** 360° **Combat Weight** 22.452 Length 6.356 m Height 2.847 m Max Road Speed 72.4 km/h **Fuel Capacity** 530 liters 161 km Road Range **NBC System** No

Night Vision Yes (driver only)

Fording 1.016 m

# 37-mm Type 65



Crew 5 to 8 Length 5.94 m Width 1.90 m Height 2.08 m Weight 2,353 kg **Gun Caliber** 37 x 253mm FRAG-T, AP-T Ammuntion Type of Feed Clip (5 rds) Rate of fire 160 to 180 rds/min **Tactical AA range** 2,500/4,000 m Optical mechanical/radar Fire control

Azimuth limits 360°
Traverse limits -5 to 85°

**RHA Penetration** 

**@1,000 Meters** 38 mm

# 30-mm M53



Crew

Role Twin AAG

Max Range Horizontal: 9,700 m; Vertical: 6,300 m

Feed 10-rd clip

Rate of fire Cyclic: 450-500 rds/min; Practical: 100 rds/min

Weight 950 kg Prime Mover 6 x 6 truck

### 12.7-mm M53



Crew

Role Quad AAG
Operation Gas, automatic

Max Range Horizontal: 6,500 m; Vertical: 5,600 m

Feed 50-rd belt in drum

Rate of fire Cyclic: 540-600 rds/min; Practical: 80 rds/min

Weight 628 kg Prime Mover 4 x 4 truck

# 23-mm ZU-23 Towed



 $\begin{tabular}{ll} \begin{tabular}{ll} Weight & 950 kg \\ \begin{tabular}{ll} Caliber & 23x152-mm \\ \end{tabular}$ 

Rate of fire 1,600 to 1,800 rds/min

Tactical AA range 2,500 m

Fire control Optical mechanical computing sight

Azimuth limits Unlimited Elevation limits -10 to 90°

### 14.5-mm ZPU-2/4



Towed 14.5 x 114-mm heavy AA machinegun Type

Caliber 23 x 152-mm Rate of fire 550-600 rds/min **Tactical AA range** 1,400 m

Optical mechanical computing sight (AA), Telescope (ground) Fire control

Unlimited **Azimuth limits** 8.5 to 90° **Elevation limits** 

API, API-T, HEI, I-T Ammunition

NOTE: Vietnam uses both double and quad barrel ZPUs.

#### **AIRCRAFT**

### Mi-6 Hook



Type Twin-turbine heavy transport helicopter

Crew 5

Armament 1 x 12.7-mm MG in nose

Internal: 70 combat troops or 26,450 lbs; Slung: 17,637 lbs **Payload** 

**Maximum Speed** 162 kts Main Rotar Diameter 35 m Length 41.74 m Height 9.86 m

# Mi-8 Hip



Type Twin-turbine multipurpose helicopter

Crew 3

**Armament** 1 x 12.7-mm MG in nose

Payload Internal: 26 combat troops/4,000 lbs; external: 3,000 lbs

Maximum Cruising Speed 225 km/h

Maximum Range 570 km; with auxiliary fuel: 985 km

Main Rotar Diameter21.29 mLength25.33 mHeight5.54 m

### MI-17 HIP



Type Multirole medium helicopter

Crew 3

**Armament** Various

Payload Internal: 24 combat troops/4,000 lbs; external: 3,000 lbs

Maximum Cruising Speed 240 km/h

Maximum Range 495 km; with auxiliary fuel: 815 km

Main Rotar Diameter21.29 mLength25.35 mHeight5.54 m

#### Mi-24 Hind



Type Twin-turbine gunship/transport helicopter

Crew 4

Armament 1 x 4-barrel 12.7-mm MG mounted in chin turret

Assorted rockets, missiles, gun pods

Payload 8 combat troops

Maximum Speed172 ktsMaximum Range243 nmRotar Diameter17.30 mLength17.51 mHeight3.97 m

### **KA-28**



Type Twin-turbine multipurpose helicopter

Crew 3

ArmamentVariousPayload1,000 kgMaximum Speed135 kts

Maximum Range 1,200 km with max fuel

**NOTE:** Vietnam inventory also includes KA25 and KA32 helicopters.

#### SU-27 Flanker



**Type** Air superiority fighter

Armament 1 x 30-mm GSh-301 gun w/150 rds 12 x pylons for 8,000 kg external stores

Maximum Speed M2.35

Maximum Range 3,000 km (internal fuel) 5,200 km (1 x inflight refueling)

 Wingspan
 14.7 m

 Length
 23.335 m

 Height
 6.50 m

#### MiG-21 MF/bis



Single-seat multirole fighter Type

1 x twin-barrel 23-mm GSh-23 gun w/200 rds 4 x pylons for weapons or drop tanks Armament

Maximum Speed M2.05

Maximum Range 1,100 km; with external tanks: 1,800 km

Wingspan 7.15 m Length 15.76 m 4.10 m Height

### **SU-22**



Type Single-seat ground attack fighter 2 x 30-mm NR-30 guns w/80 rds each 9 x pylons for weapons (including nuclear weapons, 23-mm gun pods, AS-7, AS-9 or AS-10) Armament

M2.09 **Maximum Speed** Maximum Range 2,300 km 13.80 m Wingspan Length 18.75 m Height 5.00 m

#### **SHIPS**

### **TARANTULI**



Type Guided Missile Patrol Combatant

Number in Country 2

Armament

Guns

Missiles SSM: 4 x SS-N-2D STYX

SAM: 1 x SA-N-5 Grail quad launcher 1-3 x 76-mm; 2 x 30-mm Gatling guns

**Displacement** 450 tons full

**Dimensions** 184.1 x 37.7 x 8.2 ft: 56.1 x 11.5 x 2.5 m

Speed 36 kts

Range 1,650 miles at 14 kts

Crew 41 (5 officers)

Sonar FOAL Tail; active; high frequency Radar BASS Tilt: Plank Shave; E-band

#### OSA II



Fast Attack Craft - Missile Type

**Number in Country** 

Armament SSM: 4 x SS-N-2B STYX; Guns: 4 x 30-mm (2 twin)

Displacement 245 tons full

126.6 x 24.9 x 8.8 ft; 38.6 x 7.6 x 2.7 m **Dimensions** 

Speed 37 kts

500 miles at 35 kts Range

Crew 30

Surface search: Square Tie; I-band; Fire control: Drum Tilt; H/I-band; IFF: High Pole square head Radar

### **ZHUK**



Type Patrol Craft Number in Country 10

Armament

**Guns** 2 x 14.5mm (twin); 1 x 12.7mm

**Displacement** 39 tons full load

**Dimensions** 78.7 x 16.4 x 3.9 ft; 24.0 x 5.0 x 1.2 m

Speed 30 kts

Range 1,100 miles at 15 kts

Crew 13 (1 officer)

# **POULCHAT**



Displacement 100 t (full)

**Dimensions** 97.1 x 19 x 4.8 ft (29.6 x 5.8 x 1.5 m)

Speed 20 kts

Range 1,500 mi at 10 kts

Compliment 15

### **YURKA**



Type Patrol Craft

Armament Missiles: 2 SA-N-5/8 GRAIL; Guns: 4 x 30-mm (2 twin)

**Displacement** 540 tons full load

**Dimensions** 171.9 x 30.8 x 8.5 ft; 52.4 x 9.4 x 2.6 m

Speed 17 kts

Range 1,500 miles at 12 kts

Crew 45

# APPENDIX B: Biographical Data

## Tran Duc Luong President of the Socialist Republic of Vietnam

Tran Duc Luong was elected president of the Socialist Republic of Vietnam in 1997. He was reelected in 2002, receiving 97percent of the votes from the 498 National Assembly members.

President Luong was born in 1937 in the Central Province of Quang Ngai. He completed primary and secondary school in his hometown before moving to Hanoi in 1955. He is a Soviettrained geologist and technocrat.

Tran Duc Luong joined the Communist Party of Vietnam in 1959. After graduating from the Nguyen Ai Quoc National Institute of Politics, he was



elected a member of the Central Committee of the Communist Party of Vietnam in the 5th, 6th, 7th, and 8th tenures. He is a permanent member of the Politbureau.

President Luong served as Vice-Chairman and Chairman of the National Assembly's Committee for Science and Technology from 1979 until 1987. He completed the economic management course at the National Economic Academy of the USSR in 1981.

From 1979 until 1987, he served as Director General of the Department of Mining and Geology. In 1987, Luong became the Deputy Prime Minister and Permanent Representative of the Socialist Republic of Vietnam to the Council for Mutual Economic Assistance (COMECON).

Tran Duc Luong is perhaps best understood as a steady pair of hands able to meet the basic requirements of leadership in modern Vietnam; able, receptive to reform but also firm on the continuation of the Communist Party's monopoly on power.

President Luong speaks Russian, English, and French. He is married, has three children and four grandchildren.

## Nong Duc Manh General Secretary of the Communist Party of Vietnam

Nong Duc Manh was elected General Secretary of the Vietnam Communist Party at the Ninth Party Congress in April 2001, replacing the unpopular and conservative Le Kha Phieu.

Nong Duc Manh was born in 1940 in the northern province of Cao Bang. In Leningrad, he trained as a forestry engineer.

Nong Duc Manh joined the Communist Party in 1963. In 1989, he was elected to the influential Central Committee, where he headed the Committee's Ethnic Minorities Commission. In 1991, he was elected



Vice-Chairman of the National Assembly Ethnic Minorities Committee. He was voted in as National Assembly speaker in 1992 and continued to hold that position until he replaced Pheiu as Party Secretary General in 2001. His charisma and ability to project party policy in everyday language made Manh a perfect candidate for the position.

Like Luong, Manh has also been a defender of the reform process and was welcomed by the international community. Since becoming Secretary-General, Manh has performed well. He has recognized and addressed issues that concern the public, such as corruption and increasing crime. However, he retains a tough line on public dissent, particularly for democracy and independent religious groups.

## H.E. Phan VanKhan Prime Minister of the Socialist Republic of Vietnam

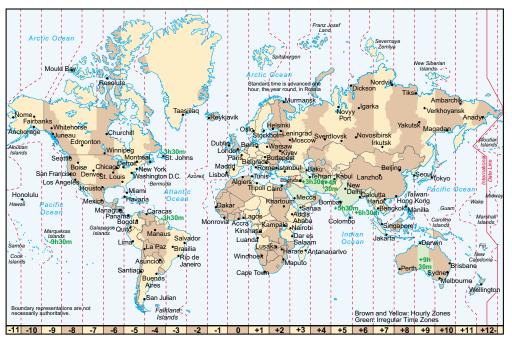
Phan Van Khai was elected Prime Minister of the Socialist Republic of Vietnam in 1997.

Prime Minister Khai was born in Ho Chi Minh City in 1933. After participating in the anti-French resistance in South Vietnam from the age of 14 until the French were defeated, he moved to North Vietnam to work in rural affairs. In 1960, he studied at the National Economics University in Moscow for 5 years. 1965. Phan Van Khai returned to Vietnam to work for the State Planning Commission in Ho Chi Minh City.



Khai joined the Communist Party in 1959. Before he was appointed Chairman of the State Planning Committee in 1989, Prime Minister Khai was the HCM City Mayor for 5 years. In 1991, he was appointed to First Deputy Chairman of the Council of Ministers and remained in the post until 1997 when he was elected to be the new Prime Minister of Vietnam. Also in 1991, he was elected to the Political Bureau of the CPV Central Committee, in which he still serves.

Khai is married and has two children.



## **Coordinated Universal Time (UTC)**

To use the table, go to the country you are interested in, and add the number of hours corresponding to the United States time zone to the current time. The UTC is also known as Greenwich Mean Time (GMT).

Country	UTC	Eastern	Central	Mountain	Pacific
Afghanistan	+4.5 H	+9.5 H	+10.5 H	+11.5 H	+12.5 H
Albania	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Algeria	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
American Samoa	-11.0 H	-6.0 H	-5.0 H	-4.0 H	-3.0 H
Andorra	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Angola	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Antarctica	-2.0 H	+3.0 H	+4.0 H	+5.0 H	+6.0 H
Antigua and Barbuda	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Argentina	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
Armenia	+4.0 H	+9.0 H	+10.0 H	+11.0 H	+12.0 H
Aruba	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Ascension	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Australia North	+9.5 H	+14.5 H	+15.5 H	+16.5 H	+17.5 H
Australia South	+10.0 H	+15.0 H	+16.0 H	+17.0 H	+18.0 H
Australia West	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Australia East	+10.0 H	+15.0 H	+16.0 H	+17.0 H	+18.0 H
Austria	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Azerbaijan	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Bahamas	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Bahrain	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Bangladesh	+6.0 H	+11.0 H	+12.0 H	+13.0 H	+14.0 H
Barbados	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Belarus	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Belgium	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Belize	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
Benin	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Bermuda	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Bhutan	+6.0 H	+11.0 H	+12.0 H	+13.0 H	+14.0 H
Bolivia	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Bosnia Herzegovina	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Botswana	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H

Country	UTC	Eastern	Central	Mountain	Pacific
Brazil East	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
Brazil West	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
British Virgin Islands	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Brunei	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Bulgaria	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Burkina Faso	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Burundi	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Cambodia	+7.0 H	+12.0 H	+13.0 H	+14.0 H	+15.0 H
Cameroon	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Canada East	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Canada Central	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
Canada Mountain	-7.0 H	-2.0 H	-1.0 H	+0.0 H	+1.0 H
Canada West	-8.0 H	-3.0 H	-2.0 H	-1.0 H	+0.0 H
Cape Verde	-1.0 H	+4.0 H	+5.0 H	+6.0 H	+7.0 H
Cayman Islands	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Central African Rep.	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Chad Republic	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Chile	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
China	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Christmas Island	-10.0 H	-5.0 H	-4.0 H	-3.0 H	-2.0 H
Colombia	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Congo	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Cook Island	-10.0 H	-5.0 H	-4.0 H	-3.0 H	-2.0 H
Costa Rica	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
Croatia	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Cuba	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Cyprus	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Czech Republic	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Denmark	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Djibouti	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Dominica	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Dominican Republic	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Ecuador	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Egypt	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
El Salvador	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
Equatorial Guinea	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H

Country	UTC	Eastern	Central	Mountain	Pacific
Eritrea	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Estonia	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Ethiopia	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Falkland Islands	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Fiji Islands	+12.0 H	+17.0 H	+18.0 H	+19.0 H	+20.0 H
Finland	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
France	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
French Antilles	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
French Guinea	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
French Polynesia	-10.0 H	-5.0 H	-4.0 H	-3.0 H	-2.0 H
Gabon Republic	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Gambia	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Georgia	+4.0 H	+9.0 H	+10.0 H	+11.0 H	+12.0 H
Germany	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Ghana	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Gibraltar	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Greece	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Greenland	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
Grenada	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Guadeloupe	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Guam	+10.0 H	+15.0 H	+16.0 H	+17.0 H	+18.0 H
Guatemala	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
Guinea-Bissau	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Guinea	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Guyana	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
Haiti	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Honduras	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
Hong Kong	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Hungary	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Iceland	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
India	+5.5 H	+10.5 H	+11.5 H	+12.5 H	+13.5 H
Indonesia East	+9.0 H	+14.0 H	+15.0 H	+16.0 H	+17.0 H
Indonesia Central	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Indonesia West	+7.0 H	+12.0 H	+13.0 H	+14.0 H	+15.0 H
Iran	+3.5 H	+8.5 H	+9.5 H	+10.5 H	+11.5 H
Iraq	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H

Country	UTC	Eastern	Central	Mountain	Pacific
Ireland	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Israel	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Italy	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Jamaica	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Japan	+9.0 H	+14.0 H	+15.0 H	+16.0 H	+17.0 H
Kazakhstan	+6.0 H	+11.0 H	+12.0 H	+13.0 H	+14.0 H
Kenya	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Kiribati	+12.0 H	+17.0 H	+18.0 H	+19.0 H	+20.0 H
Korea, North	+9.0 H	+14.0 H	+15.0 H	+16.0 H	+17.0 H
Korea, South	+9.0 H	+14.0 H	+15.0 H	+16.0 H	+17.0 H
Kuwait	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Kyrgyzstan	+5.0 H	+10.0 H	+11.0 H	+12.0 H	+13.0 H
Laos	+7.0 H	+12.0 H	+13.0 H	+14.0 H	+15.0 H
Latvia	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Lebanon	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Lesotho	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Liberia	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Libya	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Liechtenstein	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Lithuania	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Luxembourg	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Macedonia	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Madagascar	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Malawi	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Malaysia	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Maldives	+5.0 H	+10.0 H	+11.0 H	+12.0 H	+13.0 H
Mali Republic	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Malta	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Marshall Islands	+12.0 H	+17.0 H	+18.0 H	+19.0 H	+20.0 H
Mauritania	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Mauritius	+4.0 H	+9.0 H	+10.0 H	+11.0 H	+12.0 H
Mayotte	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Mexico East	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Mexico Central	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
Mexico West	-7.0 H	-2.0 H	-1.0 H	+0.0 H	+1.0 H
Moldova	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H

Country	UTC	Eastern	Central	Mountain	Pacific
Monaco	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Mongolia	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Morocco	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Mozambique	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Myanmar (Burma)	+6.5 H	+11.5 H	+12.5 H	+13.5 H	+14.5 H
Namibia	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Nauru	+12.0 H	+17.0 H	+18.0 H	+19.0 H	+20.0 H
Nepal	+5.5 H	+10.5 H	+11.5 H	+12.5 H	+13.5 H
Netherlands	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Netherlands Antilles	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
New Caledonia	+11.0 H	+16.0 H	+17.0 H	+18.0 H	+19.0 H
New Zealand	+12.0 H	+17.0 H	+18.0 H	+19.0 H	+20.0 H
Newfoundland	-3.5 H	+1.5 H	+2.5 H	+3.5 H	+4.5 H
Nicaragua	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
Nigeria	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Niger Republic	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Norfolk Island	+11.5 H	+16.5 H	+17.5 H	+18.5 H	+19.5 H
Norway	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Oman	+4.0 H	+9.0 H	+10.0 H	+11.0 H	+12.0 H
Pakistan	+5.0 H	+10.0 H	+11.0 H	+12.0 H	+13.0 H
Palau	+9.0 H	+14.0 H	+15.0 H	+16.0 H	+17.0 H
Panama, Rep. of	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Papua New Guinea	+10.0 H	+15.0 H	+16.0 H	+17.0 H	+18.0 H
Paraguay	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Peru	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Philippines	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Poland	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Portugal	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Puerto Rico	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Qatar	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Reunion Island	+4.0 H	+9.0 H	+10.0 H	+11.0 H	+12.0 H
Romania	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Russia West	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Russia Central 1	+4.0 H	+9.0 H	+10.0 H	+11.0 H	+12.0 H
Russia Central 2	+7.0 H	+12.0 H	+13.0 H	+14.0 H	+15.0 H
Russia East	+11.0 H	+16.0 H	+17.0 H	+18.0 H	+19.0 H

Country	UTC	Eastern	Central	Mountain	Pacific
Rwanda	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Saba	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Samoa	-11.0 H	-6.0 H	-5.0 H	-4.0 H	-3.0 H
San Marino	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Sao Tome	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Saudi Arabia	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Senegal	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Seychelles Islands	+4.0 H	+9.0 H	+10.0 H	+11.0 H	+12.0 H
Sierra Leone	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Singapore	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Slovakia	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Slovenia	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Solomon Islands	+11.0 H	+16.0 H	+17.0 H	+18.0 H	+19.0 H
Somalia	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
South Africa	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Spain	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Sri Lanka	+5.5 H	+10.5 H	+11.5 H	+12.5 H	+13.5 H
St. Lucia	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
St. Maarteen	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
St. Pierre & Miquelon	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
St. Thomas	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
St. Vincent	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Sudan	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Suriname	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
Swaziland	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Sweden	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Switzerland	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Syria	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Taiwan	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Tajikistan	+6.0 H	+11.0 H	+12.0 H	+13.0 H	+14.0 H
Tanzania	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Thailand	+7.0 H	+12.0 H	+13.0 H	+14.0 H	+15.0 H
Togo	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Tonga Islands	+13.0 H	+18.0 H	+19.0 H	+20.0 H	+21.0 H
Trinidad and Tobago	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Tunisia	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H

Country	UTC	Eastern	Central	Mountain	Pacific
Turkey	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Turkmenistan	+5.0 H	+10.0 H	+11.0 H	+12.0 H	+13.0 H
Turks and Caicos	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
Tuvalu	+12.0 H	+17.0 H	+18.0 H	+19.0 H	+20.0 H
Uganda	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Ukraine	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
United Arab Emirates	+4.0 H	+9.0 H	+10.0 H	+11.0 H	+12.0 H
United Kingdom	+0.0 H	+5.0 H	+6.0 H	+7.0 H	+8.0 H
Uruguay	-3.0 H	+2.0 H	+3.0 H	+4.0 H	+5.0 H
USA Eastern	-5.0 H	+0.0 H	+1.0 H	+2.0 H	+3.0 H
USA Central	-6.0 H	-1.0 H	+0.0 H	+1.0 H	+2.0 H
USA Mountain	-7.0 H	-2.0 H	-1.0 H	+0.0 H	+1.0 H
USA Western	-8.0 H	-3.0 H	-2.0 H	-1.0 H	+0.0 H
USA Alaska	-9.0 H	-4.0 H	-3.0 H	-2.0 H	-1.0 H
USA Hawaii	-10.0 H	-5.0 H	-4.0 H	-3.0 H	-2.0 H
Uzbekistan	+5.0 H	+10.0 H	+11.0 H	+12.0 H	+13.0 H
Vanuatu	+11.0 H	+16.0 H	+17.0 H	+18.0 H	+19.0 H
Vatican City	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Venezuela	-4.0 H	+1.0 H	+2.0 H	+3.0 H	+4.0 H
Vietnam	+7.0 H	+12.0 H	+13.0 H	+14.0 H	+15.0 H
Wallis & Futuna Islands	+12.0 H	+17.0 H	+18.0 H	+19.0 H	+20.0 H
Yemen	+3.0 H	+8.0 H	+9.0 H	+10.0 H	+11.0 H
Yugoslavia	+1.0 H	+6.0 H	+7.0 H	+8.0 H	+9.0 H
Zaire	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Zambia	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H
Zimbabwe	+2.0 H	+7.0 H	+8.0 H	+9.0 H	+10.0 H

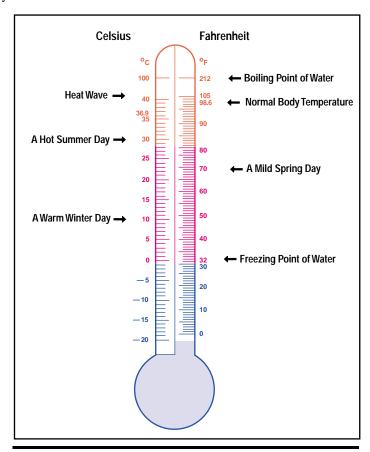
# APPENDIX D: Conversion Charts

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

<b>Units of Volume</b>	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 E: Holidays

Date Holiday

**1 January** New Years Day

**February** Tet, Lunar New Year

**3 February** Anniversary of the founding of the Communist Party

7 April Emperor-Founder Hung Vuong1 May International Worker's Day

**19 May** Ho Chi Minh's Birthday

**2 September** National Day (Ho Chi Minh declared Independence)

**3 September** Anniversary of the death of Ho Chi Minh

(occurred on the 2nd but is commemorated on the 3rd)

The Lunar New Year is the most important of the 11 lunar holidays. One day in late January or early February, everyone celebrates his or her birthday and considers himself or herself one year older. The festivities and visiting can last as long as a week. Preparations for the holiday include: cleaning houses, refurbishing ancestral graves, paying off debts and mending strained relationships.

## APPENDIX F:

## Language

The Vietnamese language (Kinh) is a fusion of Mon-Khmer, Tai, and Chinese elements. Vietnamese derived a significant percentage of its basic words from the monotonic Mon-Khmer languages. From the Tai languages, it adopted certain grammatical elements and tonality. Chinese gave the Vietnamese language most of its philosophical, literary, technical, and governmental vocabulary as well as its traditional writing system.

Vietnamese grammar is fairly straight forward, with a wide variety of possible sentence structures. The number and gender of nouns are generally not explicit nor are the tenses and moods of verbs. Instead, tool words (such as *cua*, which means "belong to") and classifiers are used to show a word's relationship to its neighbors. Verbs are turned into nouns by adding *su*.

Questions are asked in the negative, as with *n'est-ce pas?* in French. When Vietnamese ask "is it okay?" they say "It is okay, is it not?" The answer "no" means "Not okay, it is not," which really means "yes." The answer "yes," on the other hand is really a negative response meaning "yes, it is not okay."

From 1980 through 1987 anyone caught studying English was liable to get arrested. This was part of a general crackdown against people wanting to flee to the West. That attitude has changed and today the study of English is being pursued with a passion. The most widely spoken foreign languages in Vietnam are Chinese (Cantonese and Mandarin), English, French, and Russian (more or less in that order). To a large extent, the divisions between speakers of each language tends to be generational. Vietnamese in their 50s and older (who grew up during the colonial period) are much more likely to understand some French more so than the following generations, for whom English was indispensable for professional and commercial contacts with Americans.

## **Phonetics**

## Tones

no tone ma
rising må
falling må
split rising må
gutteral drop må
hook må

## Vowels

a	cat
â	but (drawn out)
ă	sought
e	shell
ē	hay
i	see
0	got
ð	boat
σ	but (short)
u	boot
ď	000000 (no true equivalent)
y	see

#### Consonants

d	z
đ	d
gi	z
kh	aspirated k as in chalk
ng	ng as in king
nh	ñ as in onion
ph	f
r	z
th	aspirated t as in time (not like english th)
tr	ch
x	S

## **Key Phrases**

#### **PHONETIC**

Còn gì nữa? Anything else? Cám thấy bệnh không? Are you feeling ill? Có thể giúp tôi không? Can you help me? Come here/come in Lai đây/Vào đi Do not touch Đừng sở vào Do you have a room? Có phòng ngú không? Do you speak English? Có nói tiếng Anh không? Excuse me Xin lõi Get a doctor Đi gọi Bác sĩ Đi đi Get out

#### **ENGLISH**

#### **PHONETIC**

Go back Đi lại đi

Good afternoon Chào buổi chiều
Good day Chào buổi chiều
Good evening/good night Chào buổi tối
Good morning Chào buổi sáng

Good bye Xin chảo

How are you?/How do you do? Khôe không?

How do I get to...? Xin dẫn đường hộ tôi đến ...

How many? Bao nhiêu?

How much does it cost? Tổn tiền bao nhiều? I don't understand Tôi không hiểu

I understand Tôi hiểu

I'm fine Tôi bình thường

I'm hungry Tôi đối

I'm lost Tôi bị lạc đường

I'm thirsty Tôi khất
I'm tired Tôi mệt
Just a minute Đợi tý
My name is... Tên tôi lã ...

No admission/entrance Cấm vào
No smoking Cấm hút
No thoroughfare Cấm đi
Straight ahead Thẳng
Straight back Sau

What does it mean? Nghĩa là gì?
What is this? Cái nay là cái gì?

What is your name? Tên là gì?

#### **ENGLISH**

#### **PHONETIC**

What is your occupation?

What is your telephone number?

What time is it?

What's wrong?

Where are we now?

Công việc là gì?

Số điện thoại là gì?

Bây giờ là mấy giờ rồ

Có việc gì không?

Chúng ta ở đâu?

Where are you going? Di đầu?
Where do you live? Sống ở đầu?

Where does this path/trail/road lead? Dường nay đi đâu?

Where have you come from? Di đầu về?
Who is that fellow? Ông ấy là ai?
Who is this? Người nay là ai?
Will you help me? Có giúp tối không?

You're welcome Không có chi

## **Key Words**

#### **ENGLISH** PHONETIC

Afternoon Buổi chiều America Nước Mỹ

And Và Bandage Băng

Barber shop Tiệm cắt tốc
Bath house Nhà tám
Beer Bia
Begin Bắt đầu
Behind Sau

Behind Sau
Big Lớn, to

Blanket Chăn Book Sách

Boots Giày cao cổ
Bread Bánh mỳ
Breakfast Ăn sáng
Bridge Cầu

Building Kiên trục Bus Xe búyt

Car Xe

Careful Cấn thận Church Nhà thờ Cigarettes thuốc Coat A6 len Coffee Ca phế Cold Lanh Come Đến Chen Cup Currency Tiền

Danger Nguy hiểm

Days Ngày
Dinner Ăn tối
Dog Chó
Down Xuống
Early/earlier Xớm
East Đông

Embassy St quan

Enough Đú

Entrance Chỗ vào
Evening Buổi tối
Exit Chỗ ra

Far Xa

Fast Nhanh First aid kit Hộp thuốc

Flashlight Dèn pin Fog Sương mù

Follow Theo
Food Com
Fork Nia
From Tử

From Tử
Gasoline/petroleum Xang đầu

Gloves Tắt tay Go Đi

Hat Mũ Head Đầu

Health Card The sức khỏe

Heavy Nặng

Hello Xin Chảo

Help Giúp Here Đây Highway Quốc lô

Hold Cam

Hospital Bệnh viện

Hot Nóng Hours Giờ

How Lâm sao Hurry Vội vàng Immediately Ngay

In Trong

Insect repellent Thuốc sát trùng Kilometers Ki lô mét, cây số

Knife Dao Late/later Muon Trái Left Đền Light Nghe Listen Khóa Lock Ăn chiều Lunch Bán đổ Map Market Cho Diêm Matches Thuốc Medicine

Midnight Nữa đem, Khuya

Miles Dâm Milk Sữa Minutes Phút

Mosque Giáo đường của Hồi giáo

Mosquito net Man

Ms/Miss/Mrs Cô/Ba
Near Gần
New Mới
No/not Không

None (Per context)

Noon Trưa North Bắc

Nothing (Per context)
Now Báy giờ
Okay Được

Old Cũ (things), già (people)

On Trên Open Mớ

Or Hay, hoặc
Out Ở ngoài
Plate Đĩa
Xin

Police Công an Radio Ra đi ô Rain Mưa

Receipt Thâu đơn Nhắc

Repeat Nhāc
Right (direction) Phái
Right/corrent Phái
School Trường

Shoes Giày

Đóng Shut Ông Sir/Mr. Sit Ngồi Sleep Ngú Châm Slow/slowly Small Nhó Snow Tuyết Soap Sa phon South Nam Stand Đứng Stop Ngưng Sun Mặt trời Taxi/cab Tắc xi Tea Trè/chà Thanks/thank you Cám ơn There Đó, đấy To Đến

Tobacco Thuốc lá Today Hôm nay

Toilet Phòng vệ sinh
Tomorrow Ngày mai
Train Xe lửa
Truth Thật

United States Nước Mỹ

Up Lên

Very Rất (before modifiee), quá (after modifiee)

Wait Đợi, chờ
Watch Đông hồ
Water Nước
Weather Thời tiết
Welcome Không dam

West Tây What Gì

When Bao giời
Where Đâu
Which Nào
Who Ai
Why Tại sao
Wind Gio

Wrong Sai Yes Vâng Yesterday Hôm qua

## Days

**ENGLISH** PHONETIC

Sunday Chú nhật
Monday Thứ hai
Tuesday Thứ bà
Wednesday Thứ tư
Thursday Thứ năm
Friday Thứ sáu
Saturday Thứ báy

#### Numbers

ENGLISH	PHONETIC
1	Một
2	Hai
3 4 5 6	Bà
4	Bốn
5	Năm
6	Sáu
7	Báy
7 8	Tấm
9	Chín
10	Mười
20 - 90	Hai mươi - Chín mươi
100	Một trăm
1000	Một ngan

## Military Vocabulary

#### **ENGLISH PHONETIC**

Không quân Air Force Phòng không Air Defense Máy bay Aircraft

Hàng không mẫu hạm Aircraft carrier

Sân bay Airfield/airport Dan dược Ammunition (not used) Amphibious Chống Anti-

Antitank weapon Súng chống tăng Armed Forces Lực lượng vũ trang

Armor/armored Bọc thép
Army Lúc quân
Artillery Pháo
Assault Tấn công

Aviation Thuật hàng không

Backpack Bao
Barracks Trại linh
Base Cắn cư
Battalion Tiểu đoàn
Battery (unit) Tiểu đoàn
Trận đánh

Bomb/bombing Bom
Brigade Lử đoàn
Camouflage Nguy trang

Coastal defense Phòng vệ duyên hái

Combat Trận đánh Command Chỉ huy

Commander Chí huy trưởng
Commandos Lực lượng đặc biệt
Communications Liên lạc, Thông giao

Company Đại đội
Conscript Trưng binh
Corps Quân đoàn

Crew Đội

Cruiser (ship) Tàu phóng pháo

Defense/defend Báo vệ

Destroyer (ship) Khu trục hạm

Division Sư đoàn
Engineer Công binh
Enlisted Linh trơn
Entrench Đấp lũy
Equipment Trang bị
Escort Đoàn hô vê

Fighter/Bomber (acft) Máy bay (chiến đấu/thả bom)

Formation Đội hình
Fortify/fortification Vững chắc
Foxhole Hang chồn
Front Mặt trận
Garrison Trại
Grenade Lưu đạn
Gun/gunner Súng

Halt Ngưng lại Headquarters Sở chi huy

Helicopter Máy bay lên thắng Howitzer Súng pháo nặng

Infantry Bộ binh
Information Thông tin
Intelligence Tin báo
Latitude Vĩ độ
Longitude Kinh độ

Machinegun Súng liên thanh

Map Bán độ

Marines Linh thủy đánh bộ

Mess hall Nhà ăn Military Quân sự Mine Min

Minefield Sân min
Mission Công tác
Mortar Cối

Navy Hái quân

Nuclear/biological/ Vũ trang nguyên tú//sinh vật/

chemical weapon hoa chất Observation post Trạm trinh sát

Sī quan Officer Hoat động Operations Khẩu hiệu Password Tuần tra Patrol Pistol Súng ngắn Trung đôi Platoon Ra đa Radar Trinh sát Reconnaissance Trung đoàn Regiment

Resupply Cung cấp Rifle Súng

Rifleman Linh Súng Signal Dấu hiệu Smoke Khối

Squad Tiếu đội Tactics Chiến thuật

Tank Xe tăng

Terrain Địa hình

Vehicle Xe

Weapon Vũ trang Withdraw/withdrawal Rút lui

#### **Terrain**

Lake Mountain

#### ENGLISH PHONETIC

Beach Bờ biển Brush Rừng râm Thành phố City Chỗ lôi Ford Forest Rừng Gorge/ravine/draw Hong Gulf Vĩnh Hill Đôi Island Đảo Jungle Rung Hö

Plain Đồng bằng Plateau Cao nguyên

Port/Harbor Cáng Ridge Chóp

Núi

ENGLISH PHONETIC

River Sông Road Đường Rock Đá

Thicket (not used) Valley Thung lũng

Village Xã

## **APPENDIX G:**

## **International Road Signs**



## 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 spraycan 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

		EAS WOR	-	MODER WOR		HAR WOR	_
Heat Cat	WBGT Index (° F)	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 done in shade if possible. **Caution:** Hourly fluid intake should not exceed 1 ½ quarts. Daily intake should not exceed 12 quarts. Note: MOPP gear adds 10° 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;
- 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.

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#### 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

mptoms:
Confusion
Cold, clammy skin
Sweating
Shallow, labored, and rapid breathing
Rapid pulse
eatment:
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.
<ul> <li>Wound should be secured with bandages.</li> </ul>
☐ Displaced organs 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.

## ■ Tourniquet:

_	NOTE: Tourniquets should only be used when an injury is	life
	threatening.	

☐ Dressings should not be removed; additional dressings may be

- ☐ 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.

☐ Pressure points may be used to control bleeding.

applied over old dressings.

- ☐ 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, remove clothing from injured area.
- Rings should be removed from fingers.
- Check pulse below injury to determine blood flow restrictions.

## Spinal, Neck, Head Injury

## Symptoms:

■ 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).
- Seek medical attention 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 (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.

M-16 Heat Guards = Splints

## **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

# APPENDIX I: 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, however, 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 an easy target.

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 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. Complying 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 avoiding 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 J:

## **Dangerous Animals and Plants**

#### Snakes

#### **Banded Krait**

#### **Description:**

Adult length 1 to 1.2 meters; maximum of 2 meters. Background color has pattern of alternating light and dark bands. Light



bands pale to bright canary yellow; dark bands generally black and wider. Has distinctive black spear-shaped mark beginning between eyes and extending back along neck. Prominent dorsal ridge down back and tail gives emaciated appearance. Tail blunt or slightly bulbous at tip.

#### Habitat:

Found in grassy fields, meadows, and cultivated areas, often near streams, rivers, and lakes. Found at elevations up to 1,550 meters.

## Activity and behavioral patterns:

Normally nocturnal; may prowl during day during and after rains. Unaggressive and stealthy. Hides head beneath body if molested; may twitch or writhe spasmodically but seldom attempts to bite.

## Venom's effects:

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

## Red-necked Keelback

## **Description:**

Adult length is usually 0.6 to 0.7 meter. Background color is olive, green-gray, or green-brown, with indistinct flecks of black and yellow



that may appear as a mid-dorsal stripe. Neck and forepart of body are vivid red; sides of head are yellow, with a sub-ocular black streak.

#### Habitat:

Commonly found in brush-covered or grassy fields near streams, ditches, and paddies.

## Activity and behavioral patterns:

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

## Venom's effects:

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

## Red-Headed Krait, Yellow-Headed Krait

## No Photograph Available.

## **Description:**

Adult length usually 1.0 to 1.2 meters; maximum of 1.6 meters. Background color is blue-black above and below, with or without yellow vertebral line. Head is 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's effects:

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

## Malayan Krait

## **Description:**

Adult length usually 1.2 to 1.4 meters. Background color is black with white or yellow crossbands speckled with black on body and tail; belly pure white. Head not distinct from neck. The 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 on trails at night.

#### Venom's effects:

Potent neurotoxin. Most victims are bitten while asleep in huts at night. Local symptoms are generally minimal. Symptoms may include abdominal discomfort, headache, and giddiness. Neurotoxic symptoms include ptosis, facial paralysis, and inability to open mouth, swallow, or protrude tongue. Fatalities have been reported.

#### Chinese cobra

## **Description:**

Adult length 1.4 to 1.6 meters; maximum 2.0 meters. Fairly heavy-bodied snake. Background color varies from gray-brown to black; belly is pale. Back of hood is unmarked, or has pale, black-edged band with central dark spectacle. May have a dark band across the throat.



May have narrow white transverse lines along the length of its body, a feature that is more prominent in juveniles.

#### Habitat:

Common in various habitats, including rice fields, marsh areas, forests, and human settlements.

## Activity and behavioral patterns:

When threatened, it rears up and spreads its hood. It is capable of spitting venom into the face of an aggressor.

## Venom's effects:

Primarily neurotoxic; also cytotoxic. May cause immediate pain and swelling at site, followed by blistering and discoloration. Within hours after bite, victim may have vomiting and abdominal pain followed by drowsiness, ptosis, and inability to open mouth or speak. If venom contacts eyes, it may cause immediate, burning pain with inflammation and permanent blindness. Fatalities have been reported.

#### Monocellate Cobra

## **Description:**

Adult length may exceed 1.5 meters. Color and pattern varies widely. Background color is yellow, yellow-tan, brown, greenbrown, olive, or black; may have alternate wide and



narrow transverse dark bands. Dorsal aspect of hood commonly has white annular marking, with black center and rim resembling an eye. May have transverse band with central eye, or lack marking altogether. Ventral surface of neck is pale or yellow with a broad, dark band.

#### **Habitat:**

Found in virtually all habitats except dense forests; frequently found in cities and villages. Most common cobra in much of Southeast Asia. Shelters in areas such as rock piles, termite mounds, fallen logs, mammal burrows, and building foundations.

## Activity and behavioral patterns:

Most active at twilight, but may bask in sun during day. Does not spit venom at aggressor.

## Venom's effects:

Potent neurotoxin and cytotoxin. Pain and swelling are often followed by blistering and extensive necrosis. Neurotoxic symptoms may include ptosis, drowsiness, dysphagia, dysphonia, and generalized weakness. Reports of mortality are high.

#### Oriental Coral Snake

## **Description:**

Adult length 0.3 to 0.5 meters; maximum 1.0 meter. Narrow body; diameter the size of a finger. Background color variable; color either russet to pink,



with narrow, widely separated black crossbands and wide cream band across the base of the head, or brown to crimson, with three longitudinal black stripes from head to tail, and a narrow cream headband. Head is small, barely distinct from neck.

#### Habitat:

Found in scrub jungles and monsoon forests. Often found near human habitats. Avoids dry terrain.

#### Activity and behavioral patterns:

Nocturnal; stays hidden during the day within humus of forest floor, or beneath logs, stones, and other debris. Can be active in early morning.

#### Venom's effects:

Likely neurotoxic. Little is known of venom. Few bites recorded. One fatality reported from Nepal.

## Mountain Pit Viper

#### No Photograph Available.

#### **Description:**

Adult length 0.6 to 0.8 meter; maximum 1.1 meters. A thick-set snake. Background color light olive, red, or orange-brown; has one or two rows of square patches meeting at vertebral line. Belly pale with brown spots. Dark brown or black triangular head, distinct from neck.

#### Habitat:

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

## Activity and behavioral patterns:

Semi-arboreal, but commonly found on forest floor near streams. Sluggish disposition, but will bite when irritated.

#### Venom's effects:

Hemotoxic. Reported symptoms include severe local bleeding and swelling, thrombocytopenia, and coagulopathy.

## Thai Spitting Cobra

## **Description:**

Maximum length 1.0 meter. Background color variable. May be entirely black or brown, white with back of hood black, or pale brown with white-yellow throat and a dark band below.

#### Habitat:

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

## **Activity and behavioral patterns:**

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, it hold on and chew savagely.

#### Venom's effect:

Primarily neurotoxic. Local pain, swelling, and necrosis common. If venom enters eyes, can cause immediate burning pain with inflammation and permanent blindness. No specific antivenin produced.

## King Cobra

## **Description:**

It is the world's largest venomous snake. Adult length is usually 3 to 4 meters, with a maximum of 5.5 meters. Background color is olive, brown, or green-yellow, becoming darker on the



tail. Head scales are edged with black. The throat is yellow or orange, sometimes with dark markings.

#### Habitat:

Can be found in 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 in elevation. The species is widespread but uncommon.

## Activity and behavioral patterns:

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

#### Venom's effects:

Is a potent neurotoxin. Severe local pain and tenderness occur almost immediately following bite. Bites are uncommon, but are usually severe and can be rapidly fatal.

## Fea's Viper

## **Description:**

Maximum length 1 meter; a moderately slender snake. Background color is blueblack or black, patterned with thin red-orange lateral bands that sometimes meet middorsally. Belly is gray. Head is red-orange, pat-



terned with two dark stripes, and is somewhat flattened and distinct from the neck.

#### Habitat:

Found in mountainous areas from 600 to 2,000 meters in elevation.

## Activity and behavioral patterns:

Terrestrial.

#### **Venom's effects:**

Little information available. Likely hemotoxic. Few bites reported. Symptoms include local pain and swelling only.

## Dark-green Pit Viper

## No Photograph Available.

#### **Description:**

Maximum length 0.7 meters. Background color uniform dark bluegreen; belly blue. Broad head, distinct from neck. Chin and throat bluewhite. May have darker crossbands on scales.

#### **Habitat:**

Open country at low elevations. Found around homes and gardens.

## Activity and behavioral patterns:

Arboreal.

## **Venom characteristics:**

Hemotoxic. Local symptoms usually include painful swelling.

## Malayan Pit Viper

## **Description:**

Adult length usually 0.6 to 0.8 meters, with a maximum of 1 meter. Background color is gray, pale brown, or pale red-brown. Has a dorsal pattern of alternating dark, triangular markings



with apices toward vertebral line, and a series of dark spots on flanks. Belly is pale with dark mottling. A relatively short, thick set snake with flattened body and large triangular-shaped head; has a pointed and slightly upturned snout. Well-defined dark postocular patch, sometimes with white edge above and below.

#### Habitat:

Found in coastal forest, bamboo thickets, overgrown farmland, and forest adjacent to plantations. Generally inhabit lowlands, but can also be found in mountains to almost 2.000 meters in elevation.

## Activity and behavioral patterns:

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

#### Venom's effects:

Potent hemotoxin. Local swelling may begin within minutes after bite, followed by blistering and necrosis. Hemoptysis, apathy, thirst, rapid thready pulse, and decreased blood pressure may occur. Bites are fairly common. Case fatality rate is low, but deaths have been attributed to cerebrovascular accidents, shock, tetanus, septicemia and anaphylaxis.

# Sharp-nosed pit viper or Hundred-pacer

# **Description:**

Adult length 0.8 to 1.0 meter; maximum 1.5 meters. A stout snake. Background color light brown or gray-brown with a series of dark brown lateral triangles on each side. Pointed tops of two opposite triangles join mid-dorsally, creating alternating triangles of different



color. A row of large, black spots extends along each side near the belly. Top and upper sides of head is uniformly black, with a straight, black postocular streak. Belly is yellow, spotted with dark brown. Color scheme is like that of the United States copperhead. Large, triangular head with distinctive long, upturned snout.

#### Habitat:

Found in low mountain slopes or rocky hills. Also found in forested mountains up to 1,400 meters in elevation, and low coastal areas at 100 meters in elevation. By day, it can be seen on rocks or among vegetation along streams, where it blends well into surroundings.

## Activity and behavioral patterns:

Nocturnal. Seems sluggish, but strikes and bites vigorously when aggravated. Stays in coiled position, ready to strike. In autumn, it hunts for rodents in rice paddies, in gardens, along roadsides, or in houses.

## Venom's effects:

Potent hemotoxin; strongly hemorrhagic. Immediate local symptoms include severe pain and bleeding, followed by swelling, blistering, necrosis, and ulceration. Systemic symptoms manifest early and suddenly, and include palpitations, dim vision, hematuria, hemoptysis, bloody stool, purpura, and anuresis. Many fatalities recorded.

# White-lipped Green Pit Viper

## **Description:**

Adult length 0.4 to 0.6 meter; maximum 0.9 meter. Long, thin snake with triangular head, distinct from neck. Background color green, varying from yellow-green to bright grass green. May have darker crossbands. Belly pale yellow-white to dark green. Upper lip



white or pale green. Side of head below eye is white, pale yellow, or light green. Back of tail red-brown.

#### Habitat:

Found in 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 unaggressive, except when threatened. When defending itself, strikes and bites vigorously.

## Venom's effects:

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

# Pope's Pit Viper

# No Photograph Available.

## **Description:**

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

#### Habitat:

Most abundant in mountainous area from 900 to more than 1,500 meters in elevation. Commonly found on tea plantations.

## Activity and behavioral patterns:

Arboreal and nocturnal. Not aggressive; often permits intruder to approach closely without striking. When threatened, opens mouth and strikes vigorously and quickly.

#### Venom's effects:

Likely hemotoxic. Little data available. No reliable reports of bites.

# Chinese Bamboo Pit Viper

## **Description:**

Adult length 0.6 to 0.7 meter; maximum of 1 meter; fairly stout snake. Background color uniform leaf to chartreuse green; no markings except thin white, yellowish white, or red and white longitudinal stripe along each side of body. Belly pale green; tail rust colored. Distinctive rusty brown or brick red eye, flecked cream color.



#### Habitat:

Bamboo thickets, bushes, and trees along water courses; found more frequently on hillsides then on level terrain.

# Activity and behavioral patterns:

Arboreal and nocturnal. Sluggish. Calm disposition, but strikes quickly if surprised or brushed against while in arboreal shelters. When threatened, may wind into coil and vibrate tail as warning.

## Venom's effects:

Primarily hemotoxic. Symptoms include severe local pain, oozing from fang marks, extensive local swelling, bruising, nausea, and vomiting. Fatalities recorded.

# Chinese Habu, Taiwanese Pit Viper

## **Description:**

Adult length is usually 0.8 to 1 meter, with a maximum of 1.3 meters. A relatively long, thin snake. Background



color is light brown or gray-brown. Has a vertebral row of large, purple-brown or chocolate-colored spots that are sometimes edged with a yellow line. Has a lateral row of dark, circular blotches. Belly is white with brown dots. Has a large triangular head with dark markings, and a thin neck. Postocular line to angle of jaw is dark with pale mark above.

#### Habitat:

Found in open agricultural country and forests up to 1,400 meters in elevation. Also found in bamboo forests, shrubs, stream banks, tea fields, and around human dwellings.

# Activity and behavioral patterns:

Generally nocturnal but may be seen during the day. Terrestrial. Generally slow moving. Its disposition varies; some are vicious and strike when threatened, while others appear to be docile and sluggish. Will almost always strike when cornered.

## Venom's effects:

Potent hemotoxin. Bites usually cause severe local pain and swelling that may involve entire affected limb; will cause tender enlargement of regional lymph nodes. Systemic symptoms may include nausea, vomiting, epigastric pain, fever, and shock, which may cause unconsciousness or generalized convulsions. Peripheral leucocytosis common. Fatalities have been recorded.

# **Arthropods**

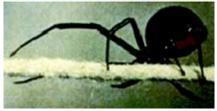
# **Scorpions**

Although there are several species of scorpions in the region are that are capable of inflicting a painful sting, none are known to be lifethreatening.

# **Spiders**

Although there are several spider species found in the region that are capable of inflicting a painful bite, only the black widow is known to be life-threatening.





## Insects

There is little specific information of medical importance regarding insects. However, nearly all countries have at least one species of moth with venomous/urticating hairs and/or whose larva (caterpillar) has venomous spines. Some caterpillars are very hairy (such as puss moths and flannel moths), and almost unrecognizable as caterpillars, with long, silky hairs completely covering the shorter venomous spines. Others bear prominent clumps of still, venomous spines on an otherwise smooth body. Some are brightly colored. Contact with these caterpillars can be very painful.

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

# Centipedes

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

# **Millipedes**

Millipedes do not bite and in general are harm-



less to humans. However, when handled, some larger millipedes (may be more than 50 millimeters long) secrete a noxious fluid that can cause severe blistering upon contact; some can squirt this fluid at least 2 feet.

## **Plant**

# Mexican Poppy

#### Other names:

Prickly pear, Argemony.

## Mechanisms of toxicity:

The entire plant contains alkaloids - sanguinarine, bergerine, protopine, and various isoquinolone and dihydrosanguinarine alkaloids, that 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 skin irritation.

## **Comments:**

Found in arid areas.

# Rosary Pea

#### Other names:

Precatory bean, coral pea, crab's eyes, lucky beans, Paternoster beans.

## Mechanisms of toxicity:

Contains several indole alkaloids such as abrine and abrin (a toxalbumin), which can kill. The unchewed seeds are impervious, and will pass through the tract without harm. Seeds are attractive and are 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 is usually in one to three days. 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 pod; inside the pod are three to five glossy, red and black seeds that are used by many as ornament). Rosary pea seeds are black at the site of attachment (hilum) and are easily confused with the much less toxic Mexican Rhynchosia (piule). The colors are reversed in piule seeds. Symptoms of toxicity include nausea and vomiting with abdominal pains, bloody diarrhea, fever, shock, and coma. Has been used in South America and Africa in folk medicine.

#### Indian laurel

#### Other names:

Mastwood, domba oil, pinnay oil

## Mechanisms of toxicity:

Cream-colored, resinous sap is irritating to the skin and eyes; round fruit contains one large, poisonous



seed. Sap is toxic. Leaves contain cyanide and a saponin.

#### Comments:

Upright, dense, low-branched tree with smooth, leathery leaves (to 15 centimeters) and white flowers with 4 petals. Native to tropical Asia -- originally from India (a common shade tree in Malaysia) and the Pacific islands. Seeds are dispersed by bats and by sea.

### Crownflower

#### Other Name:

Milkweed

## Mechanisms of toxicity:

The sap is extreme irritant to the eyes; also causes an allergic-type contact vesicant skin reaction. Active principles include calcium



oxalate, a proteolytic enzyme, digitalis-like glycosides, and an unidentified allergen.

## **Comments:**

Flowers are candied by Chinese in Java. Poisonings have caused fatalities. In Africa, the plant has been used as an arrow poison, and the roots used as chew-sticks.

# Blistering Ammania

## Mechanisms of toxicity:

Found mainly in wet places. Ammania contains quinolizidine alkaloids, and has an extremely acrid sap that causes intense pain and blistering on contact with skin.

## **Comments:**

Blistering ammania is often confused with loosestrife plants in the primrose family.

#### Croton

#### Other names:

Ciega-vista, purging croton.

# Mechanisms of toxicity:

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. Oil applied externally will blister the skin, and if consumed, 20 drops are potentially lethal. Many members covered with hundreds of sticky hairs that cling to the skin on contact. Contact with eyes can be very serious.

#### **Comments:**

Croton is a wooly-haired annual herb, evergreen bush, or small tree with smooth, ash-colored bark, yellow-green leaves, small flowers, and fruit.

# Spurge Laurel

#### Other names:

February daphne, merezon, mezereon.

## Mechanisms of toxicity:

The bark, leaves, and fruit contain toxic agents; the entire plant is toxic. The resin is acrid, and has been used as pepper substitute, with fatal consequences. Vesicular dermatitis occurs when skin contact is made; the extract is used by beggars to induce skin lesions.



#### Comments:

A very dangerous ornamental. A folk remedy for many symptoms, including dropsy, neuralgia, and snakebite.

# Milky Mangrove

# No Photograph Available.

## Other names:

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

## Mechanisms of toxicity:

Contains copious, extremely acrid, milky sap with diterpene resin, which can cause damage to the eyes, mucous membranes, and skin of those chopping or sawing its wood.

## **Comments:**

Small evergreen trees that grow to 45 feet with shiny green, leathery leaves and greenish flowers in narrow spikes; native to Indo-malaysian, Pacific Islands, Australia.

# Physic Nut

#### Other names:

Purging nut, pinon, tempate, Barbados nut.

# Mechanisms of toxicity:

Has a quickly fatal potential. The fruit has two or three black, oily, pleasant tasting, poisonous seeds con-





taining a plant lecithin (a toxalbumin called curcin) that, in contrast to many of the toxic lecithins, causes rapid toxicity. Roots and leaves are also toxic. The plant has caused death; severe toxicity can follow ingestion of a single seed. It also has intensely cathartic oils that some have used as fuel for lamps, and have suffered fatal intoxication. The bark has been used as a fish poison. It is also a skin irritant, as are all euphorbs.

## **Comments:**

There are 170 species of warm and tropical northern American trees or shrubs, usually with red flowers. It is naturalized worldwide. The fruit is a three-sided capsule in many species.

# Trumpet creeper

No Photograph Available.

# Mechanisms of toxicity:

Causes allergic-type contact and irritant dermatitis.

## **Comments:**

A woody climbing vine with fluted pink and orange flowers.

#### Jimsonweed

#### Other names:

Thorn-apple, stinkweed, Devil's trumpet.

## Mechanisms of toxicity:

Entire plant is toxic due to 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, jimsonweed has a quickly fatal potential.

#### **Comments:**

Originally called Jamestown weed after the mass poisoning of soldiers sent to quell Bacon's Rebellion in 1666, and who ate the seeds during a severe food shortage. Often confused with Angel's Trumpet.

## Sasswood

# No Photograph Available.

## Other names:

Ordealtree, mancona bark, ironwood, camel poison, black bean, Cooktown ironwood.

## Mechanisms of toxicity:

Extremely poisonous; the two main species have similar toxicities. Alkaloids of esters and amides of cinnamic acid have been isolated. Most of the alkaloids are esters of diterpenoid carboxylic acids, including cardiotoxic alkaloids. Powerful analgesic to the mucous membranes.

## Comments:

Used as a fish poison.

# Pigeonberry

## Other name:

Golden dewdrop

## Mechanisms of toxicity:

The underground parts of the plant contain dioscorine (an alkaloid), diosgenin (a steroidal saponin), and diosbulbine (a diterpene lac-



tone). The berries and leaves have a saponin that causes sleepiness, fever, and seizures; child deaths have been recorded. Can cause dermatitis on contact.

#### **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.

# Panama Tree

#### Other names:

Castano, tartargum.

## Mechanisms of toxicity:

The seeds are edible, but the pods have stiff internal bristles that easily penetrate the skin, causing intense irritation.

## **Comments:**

200 tropical species.



#### Mole Plant

#### Other names:

Caper spurge, Mexican fire plant, milkweed, red spurge, poison spurge, mala mujer, cypress spurge, cat's milk, wartwort, sun spurge, candelabra cactus, Indian spurge tree, milkwood, pencil tree, pencil cactus, rubber euphorbia.



## Mechanisms of toxicity:

Herbs, often with colored or milky sap, containing complex terpenes; irritate the eyes, mouth, and gastrointestinal tract, and many cause dermatitis by direct contact. In some cases, rain water dripping from the plant will contain enough toxic principle to produce dermatitis and keratoconjunctivitis; it can blind. Some contain urticating hairs; skin contact breaks off the ends and toxic chemicals are injected. The caper spurge has killed those who mistook the fruit for capers. The Mexican fire plant was thought to have medicinal properties in the first century, and has killed children. Red spurge causes dermatitis. The pencil cactus has an abundant, white, acrid sap that is extremely irritating to the skin; it has caused temporary blindness when accidentally splashed into the eyes, and has killed as a result of severe gastroenteritis after ingestion.

#### **Comments:**

There are 2,000 species of extremely variable form. It may appear as herbs, shrubs or trees, and many are cactus-like. The fruit is usually a capsule opening in three parts, each one seeded; it is sometimes a drupe.

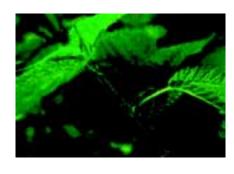
#### Wood nettle

#### Other names:

Moroides, stinger, gympie

# Mechanisms of toxicity:

Entire plant has stiff, sharp, stinging hairs that are often inconspicuous. On contact, hair tips break and an extremely irritating liquid is injected into the skin. Light



contact results in intense burning pain; a serious threat to forestry workers and jungle troops. Death was reported regarding a man who contacted the dried bark.

#### **Comments:**

Particularly thick in areas of regrowth or replanted forests. Chopping or slashing the bushes can 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 inflammation with a large flare area.

## Velvet Bean

## Other names:

Cowitch, cowhage, pica-pica, ox eye bean, horse-eye bean.

# Mechanisms of toxicity:

Many of the species' pods and flowers are covered with irritant hairs (proteolytic enzymes); dangerous if they become embedded in the eye. Beans are foul-tasting, so there is little danger of ingestion.



## **Comments:**

Many species are widely naturalized.

# Mango

#### Other name:

Indica.

## Mechanisms of toxicity:

Leaves, stem and fruit's skin contain urushiol and other similar long-chain phenois. Other allergens are also present. Eating the fruit with the skin



intact can cause dermatitis; blisters may be confined to the lips and face or may be generalized. Climbing the tree can result in severe dermatitis. Some individuals experience immediate hypersensitivity to unpeeled fruit.

### **Comments:**

Genus includes 35 species, usually large trees, primarily in Indo-Malaysia. Frequently found near human dwellings. These trees grow from 40 to 100 feet, and have lance-shaped leaves. Cultivated varieties have excellent fruit that is edible raw or cooked, though some wild varieties are unpleasant-tasting. Ground seed is used as a flour, and the fruit is used in chutney, pickles, squashes, etc.

# Annual/French Mercury

No Photograph Available.

## Other names:

Dog's Mercury

## Mechanisms of toxicity:

Native to Europe; the entire plant is toxic. Has been mistaken for edible greens. Emetic and purgative. Has proven fatal.

#### **Comments:**

Has been used as a dye source. It is a carpeting rhizome herb often characteristic of disturbed woodland.

# Poison Ivy

#### Other names:

Manzanillo, western or eastern poison oak, poison sumac, Chinese/Japanese lacquer tree, Japanese tallow or wax tree, scarlet rhus, sumac.

## Mechanisms of toxicity:

All parts of the plant



contain allergenic, nonvolatile oils known as urushiols in the resin canals. These oils are highly sensitizing (delayed, type IV sensitivity) for some individuals.

## **Comments:**

All species are deciduous, and the leaves turn red before being shed. Poison ivy is a climbing or trailing vine with trifoliate, alternate leaves that are smooth above and hairy beneath. Poison oak is never a climbing shrub, and is alternately three-leafed, smooth above and hairy beneath. It is usually found in disturbed areas and along trails in North America and is a common source of dermatitis. Poison sumac is a shrub or small tree with 7 to 13 alternate leaflets, and is found in swampy areas of North America. Very few cases of dermatitis have been caused by this species because it inhabits isolated areas and few people are exposed to it. Some individuals suffer intense, debilitating reactions from contact with the sensitizing chemicals.

#### Castor Oil Plant

# Other Name:

Castorbean.

# Mechanisms of toxicity:

This plant is commonly used to make a feed supplement. Contains a lectin (ricin, also classified as a toxalbumin), which is a highly toxic chemical, as well as some low-molecular weight glycoproteins with allergenic activity, all of which have caused serious poisonings. Its attractive nuts with a hazelnut-like





taste make this a high-risk plant. Extremely toxic ricin is present in high concentration (2-6 seeds can be fatal); ricin is stable in the presence of gastric enzymes. The seeds have been used to make necklaces, which requires boring a hole through the seed, and breaking the otherwise impermeable coat. This allows the toxin to reach the skin and enter the body through minor abrasions. Poisoning becomes evident after several hours, and symptoms include nausea, vomiting, and diarrhea.

#### **Comments:**

The seeds of this ancient plant have been found in Egyptian graves dating as far back as 4,000 B.C. It has been cultivated worldwide for 6,000 years for producing castor oil.

# Marking nut tree

#### Other names:

Tar tree, anacardium.

## Mechanisms of toxicity:

The tree is often occupied by biting ants. Many of the plants have reputations for causing severe contact dermatitis. Anacardium fruit can drip a black, oily resin that hardens like lacquer. The resin can also produce severe dermatitis. Toxic principles are similar to mango tree or poison ivy.

#### **Comments:**

The tree is indigenous to India. It is used to make a



liquid for marking laundry in India and Malaysia. The fleshy, swollen basal parts of the fruits are edible.

# Fish berry

No Photograph Available.

## Other name:

Indian berry

## Mechanisms of toxicity:

The fruit is highly poisonous and contains picrotoxin. It has been used as a fish poison (causing the fish to also be toxic) and in an ointment to kill lice. (Ointment is dangerous.) Malaysian natives use it in arrow poison. It has been used in India as an adulterant to beer to increase the power of intoxication, a practice that has resulted in deaths.

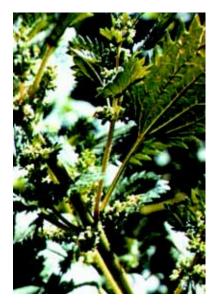
# Stinging Nettle

#### Other names:

Roman nettle, Roman nettle, dog or small nettle.

## Mechanisms of toxicity:

Brushing against the plant shears off a protective cap from specialized stinging hairs, allowing skin puncture. After puncture, an irritant liquid is released that can contain several pro-inflammatory mediators, including alkaloids, histamine, acetylcholine, and 5 hydroxytryptamine. These substances cause immediate reaction after a nettle sting. The term "urticaria," describing the character-



istic skin eruption, is derived from the genus name. Thought to be a defense against browsing animals; it usually does not involve a hypersensitivity reaction. Stinging can persist at the site for more than 12 hours after clinical features of urticaria have disappeared. This persistence of symptoms is due to a secondary release of inflammatory mediators, or persistence of implanted hairs.

#### **Comments:**

It is a genus of 30 species, usually perennial, single-stalked herbs less than 0.3 meter (1 foot) in height, found mainly in northern temperate areas. The tender tips are used as a leafy vegetable in some locales; simmering in water renders the stingers ineffective.

# Heliotrope

#### Other names:

Cherry pie, scorpion's tail, Indian heliotrope.

## Mechanisms of toxicity:

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



## **Comments:**

A large genus of worldwide distribution; there are 250 tropical and temperate trees and shrubs.

# Chinaberry

#### Other names:

White cedar, African lilac, bead tree

## Mechanisms of toxicity:

Round, yellow 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. Widely cultivated.

# Balsam apple

#### Other names:

Leprosy gourd, bitter gourd, cucumber gourd

## Mechanisms of toxicity:

Seeds and outer rind of ripe fruit contain a toxalbumin called momordin; ripe fruit also has a hypoglycemic agent. Small amounts cause headache, flushing, salivation, dilated pupils, emesis,



diarrhea, and abdominal pain. Can kill.

#### **Comments:**

A slender vine with small yellow flowers. Fruits have a rough outer rind, a variable, gourd-like shape, and is usually yellow with red pulp.

## **Pokeweed**

#### Other names:

Pokeberry, poke salet.

## Mechanisms of toxicity:

Mature stems, roots, and berries are poison; saponins are mostly in foliage and roots. Death possible when plant is not prepared properly.



## **Comments:**

Young shoot tips, less than 6", are eaten in many cultures, including Canada. Requires proper preparation; must be boiled with water changes. Dye from berries is used to color ink, wine, and sweets.

# Strychnine

#### Other names:

Nuxvomica tree, Snakewood tree

## Mechanisms of toxicity:

The entire 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. It 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 Americans.

## Modikka

# Mechanisms of toxicity:

The root is reported to contain prussic acid and a cyanogenic glycoside, which can be destroyed through drying. It also contains a toxalbumin called modeccin, which is a protein-synthesis inhibitor. The root is often mistaken for an edible tuber, especially when food is scarce, and has caused poisonings. Death has occurred after ingestion of the fruit. Symptoms within one day are mainly due to the hydrocyanic acid; the toxalbumin causes illness a few days later. It has been used in India as a worming medicine; the sap is very irritating. In Africa, the plant has been used to commit murder.

## Comments:

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

# Rattlepod

#### Other names:

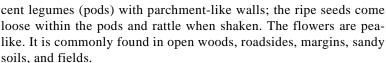
Rattlebox, rattleweed, chillagoe, horse poison.

## Mechanisms of toxicity:

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



The fruits are inflated dehis-



# Manghas

## No Photograph Available.

## Mechanisms of toxicity:

The seed contains irritant toxins and cardiac glycosides, which can cause severe purging, even death, if eaten.

## **Comments:**

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



## Shanshi

# Mechanisms of toxicity:

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 nut-



lets. The bark is used for tanning, and the crushed fruit as a fly poison. It is used in folk remedies.

# May apple

#### Other name:

American mandrake

# Mechanisms of toxicity:

A dangerous plant used in many folk-remedies. The podophyllin resin is in all parts; the rootstock, leaves, and unripe fruit contain the toxin



podophylloresin (purgative), the glycoside podophyllotoxin (a lignan), and the antimitotic peltatin. All parts are poisonous except the ripe fruit, which is edible. Ingestion results in vomiting and severe diarrhea; fatalities have resulted from repeated ingestion or topical application 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.

# English Yew

#### Other names:

Ground hemlock, American yew, Japanese yew.

## **Mechanisms of toxicity:**

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. The pulse slows, blood pressure drops, and death is caused by respiratory paralysis. No proven treatment exists. Emptying the stomach hours after ingestion may be helpful as leaves may not pass quickly through the tract. 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 once called the tree of death.

# Freshwater Mangrove

No Photograph Available.

## Other names:

Putat, bitung, laut.

## Mechanisms of toxicity:

Saponins and hydrocyanide have been isolated from the fruit and seeds. Has been used as a fish poison on many Pacific islands. The fruit contains a triterpenoid saponin; the seeds are emetic and have been shown to induce hypogleemia in rodents.

## **Comments:**

It is a large tree found growing along shorelines, and has large (20-38 centimeters-long, 10-15 centimeters-wide) non-toothed leaves, white to pink flowers (on individual stalks, square in cross section), and one-seeded fruits (9-13 centimeters-long, square in cross-section). The seeds are crushed and used as fish poison by Australian troops and aborigines.

# APPENDIX K: 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			
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Kenya	254	United Kingdom	44			
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Libya	218	Yemen	967			
Madagascar	261	Zambia	260			
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