Trinidad and Tobago Country Handbook

This handbook provides basic reference information on Trinidad and Tobago, 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 Trinidad and Tobago.

The Marine Corps Intelligence Activity is the community coordinator for the Country Handbook Program. This product reflects the coordinated U.S. Defense Intelligence Community position on Trinidad and Tobago.

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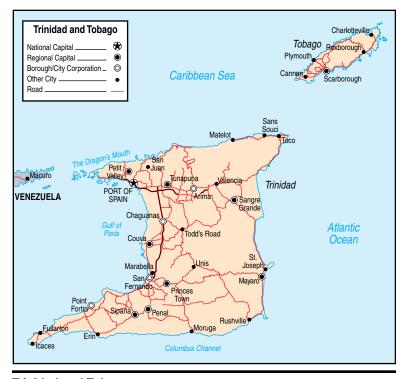
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Trinidad and Tobago

KEY FACTS

Official Name. Republic of Trinidad and Tobago *Short Form*. Trinidad and Tobago

Head of State. President George Maxwell Richards

Head of Government. Prime Minister Patrick Manning

Population. 1,047,400 (20085)

Capital. Port of Spain

Flag. The flag is red with a white-edged black diagonal band from the upper hoist side to the lower fly side

Languages. English (official), Hindi, French, Spanish, and Chinese

Time Zone. UTC (formerly GMT) –4.

Telephone Country Code. 1-868

Calendar. Gregorian

Fiscal year. 1 October through 30 September

Currency. US\$1 = 6.35100 Trinidad/Tobago Dollar (TTD)



National Flag

U.S. MISSION

U.S. Embassy

The mission of the U.S. embassy in Port of Spain is to carry out diplomatic, economic, and commercial representation; visa adjudication; American citizen services; and media, press, educational and cultural exchanges.

Location 7-9 Marli Street

Port of Spain, Trinidad and Tobago

Mailing Address United States Embassy

15 Queen's Park West

Port of Spain, Trinidad and Tobago

Telephone +1 (868) 622-6371

Fax +1 (868) 628-5462

E-mail Address ircpos@state.gov

Internet Address trinidad.usembassy.gov/

Office Hours 0730 to 1600

U.S. Military Facilities

There are no U.S. military facilities in Trinidad and Tobago.

Travel Advisories

Travel advisories report that violent crime, including armed robbery, has been increasing on both islands. Indiscriminate bombings have taken place in Port of Spain. Americans should use caution when traveling from Piarco Airport or visiting isolated beaches. Travelers should avoid the Ft. George scenic overlook in Port of Spain and stay away from public demonstrations.



U.S. Embassy

Entry Requirements

A yellow fever vaccination is required for entry. Recommended vaccinations include hepatitis A, hepatitis B, rabies, and typhoid, and booster doses for tetanus, diphtheria, and measles.

U.S. citizens must have a passport and a departure ticket to enter Trinidad and Tobago.

Visas for U.S. citizens are not required for tourism or business related travel of 90 days or fewer. Work permits are required for paid and some unpaid employment, including missionary work. Business visas require a company letter.



Isolated Beach on Trinidad

Caribbean Community and Common Market (CARICOM) Single Domestic Space temporarily enables holders of the special CARICOM visa to travel freely between Antigua and Barbuda, Dominica, Guyana, Saint Lucia, Barbados, Grenada, Jamaica, St. Kitts and Nevis, St. Vincent and the Grenadines, and Trinidad and Tobago.

Customs Restrictions

It is illegal to import narcotics, seditious publications, specific animals such as monkeys or mongoose, used or second-hand animal blankets, saddle cloths, felting or pads, dung, and certain knives, firearms, weapons, and explosives.

It is illegal to export explosives, firearms, ammunition, and ordnance, some marine and plant species, items related to foreign policy and national security, human organs, live non-livestock animals, works of art, artifacts, non-ferrous metal scrap and ores, and subsidized items.

Travelers may bring reasonable amounts of personal items including up to 200 cigarettes or 50 cigars, and 1 liter (1.05 quarts) of alcohol. A declaration is required for transportation of US\$5,000 or more.

Credit Cards. Credit and debit cards are widely accepted.

Automatic Teller Machines. Automatic teller machines are widely available.

GEOGRAPHY

Trinidad and Tobago is a chain of two main islands and 21 smaller islands and islets.

Land Statistics

Trinidad and Tobago is located in the southeastern Caribbean Sea, 11.3 kilometers (7 miles) northeast of Venezuela and 132 kilometers (82 miles) south of Grenada. Tobago is located 31 kilometers (19 miles) northeast of Trinidad.

The land area of Trinidad is 4,828 square kilometers (1,864 square miles), of Tobago, 300 square kilometers (116 square miles). The total land area of both islands is similar to that of Delaware.

Boundaries

The coastline is 362 kilometers (225 miles) long. Barbados and Guyana claim that Trinidad and Tobago's maritime boundary extends into their waters. Trinidad and Tobago has denied fishermen from Barbados traditional fishing rights north of Tobago. In 2004, a joint arbitration concluded that Trinidad and Tobago should

grant these rights. Guyana may request arbitration for a dispute over Trinidad and Tobago's maritime boundary.

Bodies of Water

The Arena Reservoir, near the Caroni River, is the largest reservoir in Trinidad. It contains 46.6 million cubic meters (12.3 billion gallons) of water. The Hollis Reservoir, in the Valencia Valley, holds 4.8 million cubic meters (1.3 billion gallons) of water. The Navet Reservoir, near the village of Tabaquite, contains 18.2 million cubic meters (4.8 billion gallons) of water. The Hillsborough Reservoir holds 851,717 cubic meters (225 million gallons) of water and is the largest source of drinking water on Tobago. The Hillsborough River supplies water to Scarborough and southwest Tobago.

Due to the islands' small size, the river systems are short. The longest river in Trinidad and Tobago is the Ortoire in the south, which flows 50 kilometers (31 miles) eastward to the Atlantic Ocean. The Caroni River in the Northern Basin supplies a substantial portion of Trinidad's drinking water. Other rivers include the Oropuche River in the northern basin and the Navet River in the central range.

Reservoir and river water resources are regulated by dams throughout the year. However, water shortages occur in the Northern Range valleys during the dry season.

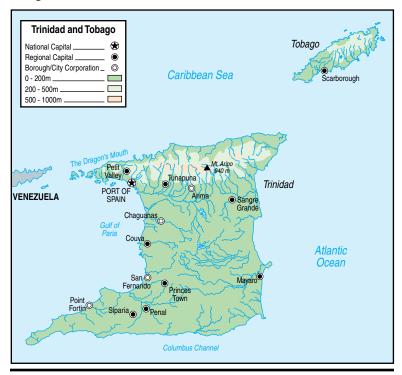
Topography

Most of the land on Trinidad consists of flat plains or rolling hills. However, three mountain ranges run east to west across the northern, central, and southern areas of the island.

Tobago is a narrow island with a mountainous ridge running along its length. The most prominent landform on Trinidad is the

Northern Range, which is a continuation of the Andes Mountains of South America. The Northern Range runs east to west in the northern region of Trinidad and has an average elevation of 457 meters (1,500 feet). The Northern Range foothills lead to the Northern Plain region and the Central Range in the middle. The Southern Range also contains some low hills.

El Cerro del Aripo, in the Northern Range, is the highest peak on Trinidad at 940 meters (3,084 feet). The lowest point is at sea level along the coast.



Topography



Mt. Saint Benedict on Trinidad Photo by Nigel Des Vignes

Forest area covers 2,260 to 2,480 square kilometers (873 to 958 square miles), slightly less than half the country's total land area. The government owns 77 percent of the forested land. Vegetation consists of around 2,500 species of plants. Natural vegetative regions include savannah, swamp, marshland, forest, and woodland.

The forest has a dense canopy often higher than 46 meters (150 feet). Vegetation becomes thicker and more abundant as elevation rises.

Cross Country Movement

Undeveloped vegetative regions including tropical rain forest and humid wetlands cover nearly half of the land area. Due to the large amount of undeveloped land area and mountainous terrain, four-wheel-drive vehicles with high clearance are best suited for cross-country travel, and many forest areas are impassable to vehicles.

Passage of wetland areas requires amphibious craft. The largest wetlands are on Trinidad, including Caroni Swamp, in the west, 5,611 hectares (13,865 acres); Nariva Swamp, on the east coast, 6,234 hectares (15,404 acres); and South Oropuche Swamp, in the south, 5,642 hectares (13,942 acres). Traveling the 31 kilometers (19 miles) between the two islands requires aircraft or sea vessels.

Tropical storms and hurricanes are infrequent, but flash flooding and landslides are widespread and regular.

Heavy rains cause landslides that can crush vehicles and block roadways. Drainage channels in the mountains and foothills should be avoided during and immediately after heavy rain. Poor drainage often causes severe flooding.

Urban Geography

Many of Trinidad and Tobago's urban centers such as Port of Spain, San Fernando, and Scarborough are located on the coastline. The



Mountainous Terrain and Forest

Central Business District of Port of Spain has numerous deteriorated buildings, chronic traffic jams, and poorly maintained roads. The government has implemented programs to repair and develop urban areas, including the construction of new high-rise buildings. The neighborhoods of Woodbrook, St. Clair, and Belmont are former suburbs that have been heavily urbanized.

Building density in most districts of Port of Spain is 15 to 25 buildings per hectare (6 to 10 per acre), rising to 35 per hectare (14 per acre) in the eastern residential areas. Roads in Port of Spain lie in grid formation, with roads running north to south or east to west.

Three-quarters of the population is considered urban, creating a housing shortage and congestion in cities. Government housing projects are located throughout urban areas, and many have high crime rates. Tourism does not generally aggravate urban congestion, as most tourists prefer Tobago.



Port of Spain

Environment

Environmental issues include pollution from oil, deforestation, soil erosion, and water pollution from agricultural chemicals, industrial wastes, and raw sewage. Deforestation affects the Northern Range, Southern Range, and the Caroni River Basin of Trinidad. Central Trinidad experiences severe overgrazing.

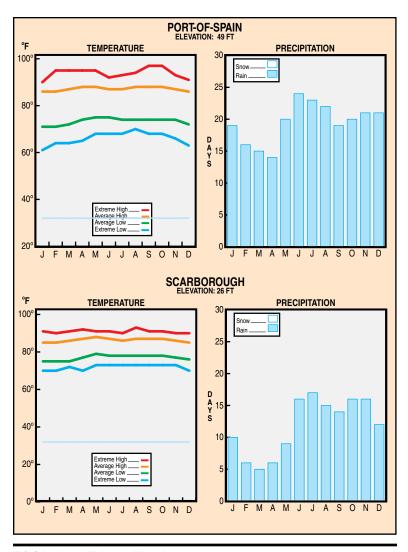
The government regulates the use and disposal of hazardous wastes, limits industrial and commercial pollution, and protects wetlands and biodiversity.

CLIMATE

Trinidad and Tobago have a tropical marine climate.



Buccoo Reef



Trinidad and Tobago Weather

Precipitation

The dry season is from January through May, and the wet season runs from June through December. The wet season accounts for 80 percent of annual rainfall. Two rainfall peaks regularly occur in the months of June or July and November. A short dry period within the wet season begins at the end of September.

Trinidad and Tobago is located outside the usual direct path of hurricanes and other tropical storms, although the islands regularly experience thunderstorms and heavy winds.

Annual rainfall ranges from 120 to 380 centimeters (47 to 150 inches) annually.

TRANSPORTATION AND COMMUNICATION

Transportation

Trinidad and Tobago is a rapidly developing nation with adequate infrastructure. Travel between the two islands can be conducted only by boat or plane, but the road infrastructure is solid only in urban areas. There is no rail system. As an international shipping hub and prominent business location, Trinidad and Tobago experiences significant maritime and air traffic.

Roads

The main road network for the entire nation is 6,800 kilometers (4,225 miles) long, with an additional 2,000 kilometers (1,243 miles) of agricultural access roads. There are 300 kilometers (186 miles) of unpaved roads, and 1,059 bridges. Traffic drives on the left side of the road. Traffic can be heavily congested in urban areas. Road quality is good in urban areas, but poor in

many rural areas. There is no mass transport system, though there are plans for light rail transport. Budget priority has been given to rebuilding decayed roads and bridges, particularly in rural areas.

On Trinidad, Port of Spain is connected with the Piarco International Airport area by a 6-lane highway and a two-lane road. There are several other well-maintained four-lane highways. The industrial estates in Port of Spain and Point Lisas are connected by a solid road network.

Bus services are operated by the Public Transport Service Corporation, a state-owned transit company. Buses are inexpensive, but unreliable and often crowded. On Trinidad, all main towns are connected by bus. On Tobago, there is regular bus service between the main bus station in Scarborough and the stations in Crown Point, Buccoo, Plymouth, and Roxborough.

Taxis are widely available in urban areas; official taxis are marked with an 'H.' Private taxis are common but more expensive. Rates should be confirmed with the taxi driver prior to departure.

Traffic accidents are common. Drivers stop frequently without warning, and rules of the road are extraordinarily flexible. Drunk driving is fairly common. In 2000 there were 10 traffic fatalities per 100,000 people.

Rail

There is no rail network in Trinidad and Tobago.

Air

	Elevation	Runway			
Airport, Coordinates	m (ft)	Length x Width m (ft)	Surface	Condition	
Piarco, Port of Spain, Trinidad 1035N 06120W	18 (58)	3,200 x 46 (10,500 x 150)	Asphalt	Good	
Crown Point, Scarborough, Tobago, 1109N 06050W	12 (38)	2,744 x 48 (9,002 x 159)	Asphalt	Runway grooved	

Domestic airlines Caribbean Star and British West Indies Airlines (BWIA) conduct several daily flights between the islands. BWIA also operates flights to Miami, New York, Washington, London, Caracas, Georgetown (Guyana), Margarita, Suriname, Costa Rica, and most Caribbean locations. There are many direct flights into and out of both international airports daily to destinations in the Caribbean, North America, South America, and Europe.

Cargo airlines Fine Air and Amerijet service Trinidad and Tobago; BWIA offers cargo services as well. DHL and FedEx both route flights through Trinidad.

After a 2006 al-Qa'ida plot to blow up airplanes from London was discovered, Trinidad and Tobago sharply increased airport security measures. The Trinidad and Tobago Police Service and the Customs and Excise Division now inspect all carry-on baggage.

Maritime

The Port of Spain port and the Point Lisas Port on Trinidad are located on the west side of the island, where they are protected from high winds and bad weather. The 63.5-hectare (157-acre, figure does not include industrial estate) Port of Spain port handles all major dry cargos, containers, and passenger traffic. It is managed by the Port Authority of Trinidad and Tobago.

The 1,000-hectare (2,471-acre, figure includes industrial estate) Point Lisas port and industrial estate on Trinidad is primarily industrial, with specialized installations for petrochemical and chemical uses. It is managed by Point Lisas Industrial Port Development Corporation.

The Port of Scarborough on Tobago is non-industrial and is primarily used for cruise ships and inter-island transport.

Port, Coordinates	Berths	Anchor Depth	Pier Depth	Cargo Capacity
Port of Port of Spain, Trinidad, 1039N 06131W	11	10 m (33 ft)	3.4-4.6 m (11-15 ft)	120,000 *TEUs (stacking capacity)
Point Lisas Port, Trinidad 1024N 06130W	4	3.4-4.6 m (11-15 ft)	11.0-12.2 m (36-40 ft)	1,000 *TEUs (Open Container Storage)
Port of Scarborough, Tobago, 1111N 06044W	N/A	14.0-15.2 m (46-50 ft)	26-30 m (7.9-9.1 ft)	N/A
TEU = 20-foot-equivalent unit				

The government has strict surveillance and security procedures, following a sharp rise in drug trafficking, vessel hijacking, and piracy beginning in the 1990s.

Communication

For a developing nation, Trinidad and Tobago has fairly sophisticated telecommunications infrastructure and a modern media industry.

Radio and Television

Twenty-two national radio stations operate in Trinidad and Tobago, of which two are AM stations.

Maj	jor Stations	Location	Programming
90.1 FM	WACK FM	Port of Spain	Urban, soca, reggae
90.5 FM	Radio 90.5	Port of Spain	East Indian music, news
91.9 FM	Soca 91.9	Port of Spain	Soca
92.1 FM	Radio Tambrin	Scarborough	Island urban
93.1 FM	Hott FM	Tobago	Pop
93.5 FM	Hott FM	Port of Spain	Рор
94.1 FM	City 94	Trinidad	Urban, rhythm
95.1 FM	The Best Mix	Port of Spain	Pop
95.5 FM	i95.5 FM	Trinidad	News, talk
96.1 FM	WEFM	Port of Spain	Urban, reggae, dance, soca
96.7 FM	Red FM	Port of Spain	Soca
98.1 FM	Isaac 98.1 FM	Port of Spain	Gospel
101.1 FM	Masala Radio	Port of Spain	Soca, Indian pop
101.7 FM	Heritage Radio	Port of Spain	Music, sports, news, Hindi
102.1 FM	Power FM	Tobago	Talk, news
102.5 FM	Power FM	Port of Spain	Talk, news
103.1 FM	FM 103	Port of Spain	Hindi music, news, sports
104.1 FM	Ebony 104FM	Trinidad	Talk, Creole
106.1 FM	Sangeet	Port of Spain	Hindi music
106.5 FM	Sangeet	Saint James	Hindi music
730 AM	Inspiration Radio	Trinidad	Christian
610 AM	NBS Radio	Trinidad	National Broadcasting Service

Many people listen to the radio on a regular basis, both on car radios and at home. Roughly 84 percent of households own a radio.

Three local TV stations, two of which are commercial and one informational, operate in Trinidad and Tobago alongside one cable network and one satellite service. Direct TV, the satellite provider, allows users to select from 56 TV channels, 29 pay-per-view chan-

nels, 54 music-audio channels and 5 Spanish channels. Roughly 87 percent of households own a television.

Station		Location	Programming	
Channel 4	NCC 4	Port of Spain	State-run media	
Channel 6	CCN TV 6	Port of Spain	Sports, news, soap opera	
Channel 9	CNMG-TV	San Fernando	State-run media	
Channel 13	CNMG-TV	Port of Spain	State-run media	
Channel 16	NCC 4	San Fernando	State-run	
Channel 18	CCN TV 6	Tobago	Sports, news, soap opera	
Channel 23	Gayelle	Port of Spain	Local, talk, soap opera	
Channel 25	ACTS25	San Fernando	Religious	
Channel 35	WIN TV	Port of Spain	Local interest	

Telecommunication

Telecommunications Services of Trinidad and Tobago (TSTT) was the monopoly telecommunications provider for Trinidad and Tobago until 2005, when the government licensed two competitors, Digicel and Laqtel, to compete in the cellular market. TSTT maintains its monopoly over land lines. Because of the monopolistic nature of the sector, prices for telecommunication services are significantly higher than in the United States.

Telecommunications coverage is high compared to other Caribbean nations, but still far from the development goals laid out by the government. There are 23 main telephone lines per 100 people, and 10.3 cellular phone subscribers per 100 people. Cellular access is available throughout both islands.

Telecommunications infrastructure is advanced. Trinidad and Tobago is at the south end of the Eastern Caribbean Fiber-Optic

System (ECFS), one of the world's most advanced links. It is also connected via the Americas 1 Fiber-Optic Cable System to the United States, Venezuela, and Brazil.

Newspapers and Magazines

Newspaper	Frequency	Language	Web Address
Daily Express	Daily	English	http://www.trinidadexpress.com/
Trinidad Guardian	Daily	English	http://www.guardian.co.tt
Newsday	Daily	English	http://www.newsday.co.tt
Tobago News	Weekly	English	http://www.thetobagonews.com/
The Bomb	Weekly	English	N/A
The Punch	Weekly	English	N/A
The T'n'T Mirror	Weekly	English	http://www.tntmirror.com/
The Catholic News	Weekly	English	http://www.catholicnews-tt.net/

All major publications except *The Catholic News* are privately owned and operated, resulting in an independent press. Freedom of the press is guaranteed by the constitution and generally upheld in practice.

Postal Service

The Trinidad and Tobago Postal Corporation (TTPost) was incorporated in 1999 and is fully owned by the state. It is operated as a private company by New Zealand Post International Limited (NZPIL) and funded by a World Bank loan. NZPIL has been criticized for corruption, inefficiency, and turning heavy losses.

There are many easily accessible post offices. First class postage for letters to the United States is typically TT\$3.45 (US\$0.55), and TT\$2.25 (US\$0.36) for a postcard. The postal service is a bit slow, with airmail taking 1 to 2 weeks to reach the United States and surface mail taking up to 6 weeks for foreign destinations.

Express mail and courier services are available through DHL, Federal Express, and UPS, as well as domestic airlines BWIA and Specialised Airline Services.

Internet

Because household personal computer (PC) coverage is low (8 PCs per 100 people), cyber cafes are a popular means of internet access. There are 12,207 hosts in the country, and 160,000 users.

Dialup is the most common means of internet access in Trinidad and Tobago. Another method is 619-EASY, a TSTT service that allows PC owners without internet service provider subscriptions to access the internet for TT\$0.75 a minute. In 2006, TSTT began offering wireless broadband access. There is also general packet radio service, a TSTT service that allows enabled cellular telephones or handheld computers to access e-mail and the internet. Asymmetric DSL is available in some areas.

Columbus Communications Trinidad Ltd. offers cable internet access in Port of Spain, Diego Martin, Westmoorings, and Chaguaramas. There are a number of Wi-Fi hotspots in urban and resort areas, many of which are free.

Satellites

Trinidad and Tobago has an Intelsat license for telecommunications uses, using the Atlantic Ocean satellite coverage. Satellite radio listeners may tune in to Voice of America on Domsat, which uses the Galaxy III-C satellite, or LA Net, which uses the New Skies Satellite 806.

Two satellite internet services in Trinidad and Tobago, Starworx and DirecPC, discontinued satellite internet service in mid-2005. No commercial satellite internet providers remain in the country.

CULTURE

Statistics

Total population	1,047,400 (2008)
Population growth rate	-0.891 percent
Birth Rate	13.22 births/1,000 population
Death rate	10.6 deaths/1,000 population
Net migration rate	-11 migrant(s)/1,000 population
Life expectancy at birth	67 years
Age structure	
0-14 years	19 percent
15-64 years	71.8 percent
65+ years	9.2 percent

Population Patterns

Population density is 97 people per square kilometer (252 people per square mile). Forty-four percent of the land is urban or is within 3 kilometers (1.9 miles) of an urban area.

City/Region	Population
Port of Spain City	49,031
San Fernando City	55,419
Chaguanas Borough	67,433
Tunapuna-Piarco Region	203,975
Couva-Tabaquite-Talparo Region	162,779
San Juan-Laventille Region	157,295
Diego Martin Region	105,720

In the 1980s, 50 percent of the population lived in urban areas. Today, 72 to 76 percent of the population is considered urban.

A high rate of emigration from Trinidad and Tobago contributes to the country's slowed growth rate. Ninety-six percent of the population lives on Trinidad; the remaining 4 percent live on Tobago.

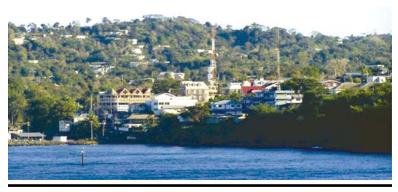
Ninety percent of the population lives on the west coast of Trinidad or in the western foothills of the northern range.

Southwest Tobago is densely populated, with 55.2 percent of the population living in the St. Paul and St. John parishes. Scarborough is the most developed city on Tobago and has the highest population on the island.

Ethnic Density

Percent of			Percent of
Ethnicity	Population	Ethnicity	Population
East Indian	40	Other	1.2
African	37.5	Unspecified	0.8
Mixed	20.5		

Many races live on Trinidad, but most Tobago residents are of African descent. The African population is centered around the



Scarborough on Tobago Photo by Keith Rock

Port of Spain region and on the foothills of the Northern Range. The Indian population lives in mostly rural areas in central and southern Trinidad. Most of the Chinese population is located in St. George County in northwestern Trinidad.

Society

Although Trinidad and Tobago is one of the wealthiest nations in the Caribbean, it is still a developing nation. It aspires to be a fully developed nation by 2020.

Poverty remains a problem in Trinidad and Tobago and many people want to immigrate to North America and Europe. Twenty-one percent of the population lives below the national poverty line. Thirty-nine percent of the population lives below US\$2 a day and 12 percent lives below US\$1 a day.

Trinidadians believe that the United States has helped development in technology and education. They enjoy American television, movies, and radio programs, although some blame the United States for the glamorization of sex and violence.

Trinidad and Tobago has strong traditions in art, dance, literature, and theater. The most popular traditions are calypso music and carnival celebrations. Calypso music is played with steel drums, and many songs feature social commentary.

Carnival, the most famous Caribbean festival, occurs between December and Lent (February or March) and attracts many tourists. Major parades and activities held in the last few days. Trinidadians wear elaborate costumes and dance to calypso music through the streets.

People

The major cultures in the country are Creole or African, Indian, Chinese, and Western. National celebrations are held to mark the emancipation of African slaves and the anniversaries of the first arrivals of Indian and Chinese immigrants.

Creole culture was created by mixing African culture with Spanish, French, and English colonial elements. This combination of influences produced unique forms of music, dance, food, religion, language, handicraft and names.

Many Trinidadians of Indian descent maintain elements of their Indian culture and practice the Hindu religion. Some, especially older generations, consider themselves Indians first and Trinidadians second.

The Trinidadians of Chinese descent remain culturally affiliated with their native land. Large celebrations are held on China's National Day.

Ethnic Groups

Trinidad and Tobago has a history of ethnic rivalry between the African and Indian groups, but has not experienced violent conflict. Although relations have improved in recent years, tensions remain.

African Trinidadians have traditionally dominated social and political sectors and continue to lead in the civil service, law enforcement, and the military.

Indian Trinidadians dominate the agricultural sector and many work in business, political, or religious organizations. Trinidad and Tobago's most talented writers include Samuel Selvon and V.S. Naipaul, both of whom are of Indian descent.

Chinese residents are active in many sectors of Trinidad including manufacturing, merchandising, banking, farming, politics, medicine, and hospitality. Many Chinese are well known artists, civil servants, professors, and business persons.

Many areas of the private sector are controlled by Indian Trinidadians and minorities including Caucasian, Chinese, and Middle Eastern.

The constitution guarantees equality under the law and does not discriminate on the basis of race, origin, color, religion, or gender.

Family

Parents and older family members often make great sacrifices to help children reach educational and professional goals. Urban families usually live in apartments, while rural families tend to own homes and often farm to enhance their income.

The average household size is three or four persons. Urban households typically have two children or less, while rural families sometimes have up to five children. Young adults often live with their families until married and sometimes married couples stay with the family of the husband until they are financially stable.

Women usually marry at the age of 17 to 23 years while men usually marry between 20 and 30 years of age. However, many couples live together and have children without getting married.

Indian residents occasionally arrange marriages, but most couples find their own spouse and seek parental approval. Muslim residents expect their children to marry other Muslims.

Roles of Men and Women

Women perform most household tasks such as cooking, but men also help when needed. African women tend to have more autonomy and authority in the home than women of other ethnic groups.

The law provides for equal treatment of women, but men are generally employed more and paid more than women in the private sector. Women work alongside men as lawyers, civil servants, and journalists. However, they mostly work in sales, services, and light manufacturing. Typical male professions include mechanic, artisan, and oil field rigger. Government positions pay men and women more equally.

Although men dominate both the public and private sectors, women have been elected and appointed to positions of considerable authority including positions in the legislature, the cabinet, and the judiciary. Eighteen women hold seats in the legislature, 9 are cabinet members, and 10 women are judges in the High Court.

Persons under 18 years old are legally minors. Men and women must wait to marry until age 18, but special laws enable Muslims and Hindus to marry younger. Muslim men and women are allowed to marry at ages 16 and 12, Hindu men and women at 18 and 14.

Customs and Courtesies

Trinidadians value personal contact and courtesy, and are physically expressive communicators. Conversations often involve touching and hand gestures to emphasize speech. It is important to greet people initially each day to avoid offending them.

Friends and family greet one another with a handshake or hug. Men and women may greet with a kiss, as do women to one another. Men may greet one another with a "bounce," which is touching closed fists. Typical greetings include "good morning" and "hello," but local colloquialisms include *Wuh yuh sayin?* and *Aaallright*. A common response to these greetings is "just cool."

Dress

The American style of dress is appropriate in Trinidad and Tobago. Formal dress for men includes shirt and tie, or business suit. Formal dress for women includes dresses, skirts, or pantsuits. Casual dress includes pants, jeans, skirts, and lightweight T-shirts. Camouflage clothing should only be worn when traveling on official military business; it is illegal for people not in the military or police.

Informal socializing in Trinidad and Tobago is one aspect of liming. Unannounced visits are acceptable, but the visitor should not stay past 2200 on such a visit. If invited to a friend's home, visits usually begin at 1900 and last well into the night. Gift giving is not customary unless the visit takes place during a holiday.

When dining in a private residence, people eat with a single utensil or sometimes only their hands. In public, more formal etiquette is practiced, similar to that of the United States. Tipping is not expected, but is appreciated in both restaurants and hotels. Taxi fare should be negotiated before entering the vehicle. Trinidadians tend to be informal and friendly when conducting business.

English is the official language of Trinidad and Tobago. Other common languages include Hindi, French, Spanish, and Chinese.

Older Trinidad and Tobago residents speak *patois*, a French-based Creole language. Younger residents speak *trini*, English with a heavy slang and influences from French, Spanish, Hindi, and African languages. Indians and minorities often speak their own languages as well as English.

Education and Literacy Rates

Trinidad and Tobago commits 4.3 percent of its GDP to education. Society values education highly, and a family will make great sacrifices to enable a child to go to college. To meet the educational needs of all children, the government has initiated programs to build new facilities and expand access to all levels of education.

The literacy rate is 98.6 percent. Remedial reading programs are available to children and adults with learning difficulties.

Children must attend school between ages 6 and 12. The government provides public education in Trinidad and Tobago until the age of 20. Private secondary schools exist, but are too costly for most families.

A competitive exam determines whether students are placed in college preparatory or vocational schools. Primary classroom subjects include mathematics, English, and science. Secondary school subjects include biology, chemistry, economics, French, geography, history, nutrition, and social sciences.

The female-to-male enrollment ratio for students is equal in primary school and secondary school, and 1.3 in college.

Trinidad and Tobago has many public libraries. The Heritage Library contains literature about Trinidad and Tobago by local and Caribbean authors such as Samuel Selvon and V.S. Naipaul.

Religion

Religious Affiliation	Percent of Population
Roman Catholic	26.0
Hindu	22.5
Anglican	7.8

Religious Affiliation	Percent of Population
Baptist	7.2
Pentecostal	6.8
Other Christian	5.8
Muslim	5.8
Seventh Day Adventist	4.0
None	1.9
Unspecified	1.4
Other	10.8

The African population is mostly Christian, with a small Muslim community. Most of Tobago's population is composed of Christians of African descent. Indian Trinidadians are mostly Hindu and live in central and southern Trinidad. Indian Trinidadians also make up a significant portion of the Muslim, Christian, and Catholic communities.

Government reflects some religious influences including religious overtones in political party messages and ceremonies. Some matters of national interest are discussed with religious leaders. The predominately Indian United National Congress (UNC) incorporates Hindu expressions in its public events.

The number of foreign missionaries is legally limited to 30 per denomination. Mormons maintain 30 missionaries, but the other religions and sects such as Baptists, Mennonites, and Muslims have between 5 and 10. Many Indian Trinidadians regularly travel to India for religious pilgrimages.

Religious persecution is not prevalent.

Recreation

Cricket and soccer are the most popular sports in Trinidad and Tobago. Other popular sports include basketball, field hockey, golf, netball, tennis, and volleyball. Popular outdoor activities include cycling, walking, jogging, hiking, and swimming at the beach. The government has implemented programs to increase the level of participation in sport activity.

Other activities include attending cultural festivals, visiting historical and natural scenic sites, relaxing at the many beaches, attending powerboat and horse races, or listening to live calypso music.

Trinidad and Tobago claims to hold the Caribbean's best Carnival celebration. Major cultural and religious events include Emancipation Day, Indian and Chinese Arrival Day, Independence Day, *Phagwa* and *Divali* (Hindu festivals), and *Eid-al-Fitr* (a Muslim holiday).

Cultural Considerations

Religion is an influential aspect of Trinidadian life and society. More of the population attends religious services regularly.



Queens Park Oval, Port of Spain Photo by Dominic Sayers



Pigeon Point Beach on Tobago Photo by Andy Smith

Religious organizations are active in humanitarian efforts such as providing food and shelter.

Punctuality is less important in Trinidad and Tobago than in the United States. Tardiness is common and not considered rude.

Commercial ties with the United States are strong due to proximity and similar business customs and language. Although titles such as Mr. and Ms. are used initially, first names are generally used subsequently. Business meetings are informal and friendly.

Office hours are between 0800 and 1600, or 1630 for government and businesses.

Offices are closed on public holidays. When a holiday occurs on a Sunday, offices are also closed on the following Monday. When more than one holiday occurs on the same day, offices are closed on that day and the following day.

MEDICAL ASSESSMENT

Infectious Disease Risks to Deployed Personnel

Food- or 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. If local food, water, or ice from unapproved sources is consumed, diarrheal diseases can be expected to temporarily incapacitate a very high percentage of personnel within days. Hepatitis A and typhoid fever can cause prolonged illness in a smaller percentage. Consuming unpasteurized dairy products or raw animal products increases the risk of many diseases, including brucellosis and Q fever. In addition, viral gastroenteritis (e.g., norovirus) and food poisoning (e.g., *Bacillus cereus, Clostridium perfringens, Staphylococcus* spp.) may cause significant outbreaks.

Vector-borne Diseases

Ecological conditions throughout the region support populations of mosquito vectors, particularly in urban and periurban areas. Dengue fever is the major vector-borne disease risk in Trinidad and Tobago, capable of debilitating a high percentage of personnel for up to a week, particularly under favorable conditions. Transmission levels vary from year to year, depending on conditions.

Animal-associated Diseases

Q fever and rabies are present in Trinidad and Tobago. Q fever can be spread by the wind and is primarily present in rural areas. Human rabies cases in Trinidad and Tobago occur at levels comparable with those seen in the United States.

Respiratory Diseases

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 personto-person spread of respiratory pathogens. In addition, tuberculosis skin test conversions among personnel who have contact with the local population could be elevated over U.S. military baseline rates.

Water-contact Diseases

Leptospirosis is a risk year-round for personnel directly exposed to bodies of water such as lakes, streams, or irrigated fields. In groups with prolonged exposure to heavily contaminated foci, attack rates can be high. Bodies of surface water also are likely to be contaminated with human and animal waste. Human infection occurs through direct contact of contaminated water or mud with abraded skin or mucous membranes. Wading or swimming may result in exposures to enteric diseases such as diarrhea and hepatitis via incidental ingestion of water. Prolonged water contact also may lead to potentially debilitating skin conditions such as bacterial or fungal dermatitis.

Soil-contact Diseases

Hantavirus pulmonary syndrome may occur in personnel exposed to dust or aerosols in rodent-infected areas. Rates could be high in small groups exposed to areas with heavy rodent infestation.

Sexually Transmitted and Bloodborne Diseases

Hepatitis B and HIV are present in the country. 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 gonorrhea, chlamydia, chancroid, herpes, syphilis, and venereal warts, may cause symptomatic infection among personnel having unprotected sexual contact.

Medical Capabilities

Medical capability indicators for Trinidad and Tobago are below average for the region.

- Physicians 7 per 10,000 inhabitants, compared to the regional average of 12 per 10,000.
- Nurses 29 per 10,000 inhabitants, compared to an average of 34 per 10,000 for the region.
- Health expenditures 3.5 percent of the gross domestic product, compared to the regional average of 4.9 percent.

The severe shortage of physicians and nurses and inadequate funding will hamper any effective response to mass casualty incidents.

U.S. military personnel traveling on orders should call International S.O.S before going to any foreign medical facility. The U.S. number is 1-800-834-5514; inside Trinidad and Tobago call the access number at 800-877-8000, which must be called from a hotel. Questions may be addressed to the SOUTHCOM SG's office at 305-437-1327.

Key Medical Facilities

Public hospitals will be the primary receiving medical facilities in a mass casualty incident. The government does not include use of private hospitals, which make up 20 to 25 percent of the country's total number of hospital beds, in its disaster plan. The National Emergency Management Agency plans to develop memorandums of understanding with private hospitals to cover their participation in major disaster relief operations.

Port of Spain General Hospital

The Port of Spain General Hospital (103943N 0613028W) is the primary trauma receiving facility. Although the hospital has a moderate mass casualty capability, it is not equipped or staffed to U.S. standards. The utility services are inadequate to deal with a major disaster. No emergency water supply or radio communications exist. The Port of Spain hospital is a regional tertiary referral center and part of a network of teaching hospitals that form the University of the West Indies system. Its emergency department is well designed and could expand to manage up to 10 acute trauma patients. The present staff complement allows for the handling of three emergencies simultaneously. Medical supplies are readily available. Equipment is old but adequately maintained.

Eric Williams Medical Sciences Complex

The Eric Williams Medical Sciences Complex (103848N 0612521W) is located 11 kilometers east of the city. Initially designed as a private teaching facility, it currently is the referral facility for all pediatric patients on a no-cost basis. Adults are presently referred to this facility as private patients. The facility has approximately 200 pediatric and 375 adult beds. It could conservatively manage one trauma case every 3 hours. In addition, the

Eric Williams Medical Sciences Complex is being developed as a second trauma receiving facility. There is a helipad.

Adventist Hospital

The 70-bed Adventist Hospital (104040N 0613247W) is a private medical facility, where most of the staff speaks English. It has no helipad or ambulance service. The hospital has three full-time and eight part-time British-trained physicians. Support services could accommodate a minimal mass casualty capability; however, no emergency communications system exists.

Saint Clair Medical Center

Most of the staff at the private 70-bed Saint Clair Medical Center (104006000 N0613121000W) speak English. Many of the physicians have been trained abroad. Medical care at this facility approaches U.S. standards. The average occupancy rate is 85 percent. Medical supplies are readily available and equipment is well maintained. St. Clair's has an emergency room, two operating rooms, and a 12-bed intensive care unit with an occupancy rate of 60 percent. The intensive care unit is adequately equipped but cannot accommodate more than one or two medical emergencies at once. The small emergency department is not designed to handle acute trauma patients. Because the facility has no organic ambulance capability, it normally uses the private Five Star Ambulance Company. There is no helipad, but King George V Park just west of the center may be able to support helicopter operations.

Emergency Medical Services

The number of ambulances located throughout Trinidad is adequate, but current law precludes them from being used to their full capability. All ambulances are allowed to function only at the basic life support level. According to the National Emergency

Management Agency, heavy lift helicopters are available from both the government and the oil companies currently operating in Trinidad. These pre-coordinated assets would be used as needed in the event of a mass casualty incident. The fire and ambulance service has 20 basic life support ambulances but only 14 were operational as of September 2000. These ambulances are the country's primary emergency medical response vehicles.

Additional ambulances are available from the Ministry of Health, the Red Cross, and the St. John's ambulance service. Other private ambulance services exist, but they are not currently included in the country's disaster response plan.

Trinidad has a 3-digit emergency phone system: dial 990 for fire and ambulance service and 999 for police service. Three ambulances are available to the Eric Williams Medical Sciences Complex. Two are available to the Port of Spain General Hospital—one is allocated to the accident and emergency department and the other to the maternity hospital.

Disaster Response Capability

The Trinidad fire service is the primary responder to any mass casualty incident and has ultimate responsibility for incident command. Fire service personnel are well trained and professional. There are more than 1,500 salaried firefighters and another 700 trained volunteers. Trinidad has a total of 20 fire stations. Port of Spain has three stations. The main station is located approximately 3 kilometers (2 miles) from the U.S. Embassy. At any time, approximately 400 fire fighters are on duty. The equipment is primarily British and Austrian made, well maintained, and relatively modern. Insufficient availability of repair parts is a problem.

The police service's role in a mass casualty incident is to secure the perimeter, control crowds, and keep emergency routes open for ambulances and other emergency vehicles. The Hazardous Materials (HAZMAT) Response Unit is located at the Chaguanas fire station. This unit is positioned for rapid response to the industrial complex located at Point Lisas. HAZMAT handling and response capability is limited. Trinidad is highly industrialized, with numerous petrochemical and other chemical-related industries.

In Port of Spain, the Red Cross has nine ambulances. Most of these vehicles are relatively old and function primarily as transport vehicles. As with the fire service, the training of Red Cross medical personnel probably is comparable to the level of a basic emergency medical technician.

The defense force has two reserve physicians who work 3 hours per day, serving both the coast guard and the army. The coast guard has 2 nurses and 35 paramedics. The Army has 4 nurses and 26 paramedics. Military paramedics are allowed to perform advanced life support for defense force personnel only. Both services have minimal deployable capability beyond a basic sick call mission. The defense force does not have a primary role in a mass casualty response but would supplement primary response agencies.

HISTORY

Trinidad and Tobago were discovered and named by Christopher Columbus in 1498. Trinidad became a Spanish colony, but Tobago changed hands between colonial powers frequently. After a series of colonial wars, Spain ceded Trinidad to Great Britain in 1802, and France ceded Tobago to Great Britain in 1814. The abolition of slavery throughout the British Empire in 1834 deeply impacted Trinidad and Tobago, as it prompted a mass immigration of in-

dentured laborers from India. These Indians eventually became a powerful political force, and today drive a major political party, the United National Congress.

In 1888, Great Britain combined Trinidad and Tobago into one colony to improve the profitability of the sugar industry. Over the next few decades, the colony began moving toward political independence under the guidance of several prominent political leaders. The British-appointed legislative council was opened partially to elections in 1925, the first major step toward political autonomy for the colony.

The dramatic fall of the sugar industry led to mass unemployment and the development of a labor movement in the 1920s. The movement was led by Andrew Arthur Cipriani, a charismatic veteran of World War I, who organized laborers against colonialism and built the movement into the powerful Trinidad Labour Party (TLP). Cipriani became the first in a series of charismatic and powerful political leaders who defined the politics of the islands.

The discovery of oil in 1910 led to the development of a third main industry in addition to the cocoa and sugar industries.

In the 1930s, some factions in the labor movement departed from Cipriani's moderate stance and resorted to violence. The most prominent were the black oil workers under the leadership of Tubal Uriah Butler, who founded the "Butler Party" and stirred up political unrest and racial violence. The British government conducted an investigation that concluded that rampant low wages and poverty had resulted in part from colonialism. The government resolved to grant the colony greater political autonomy.

During World War II, the United States operated military bases in Trinidad and Tobago under the provisions of the 1941 Lend-Lease

Agreement between the United States and the United Kingdom. These bases provided Trinidadian laborers with higher-wage jobs.

Universal suffrage was instituted in 1946, followed by a series of steps toward self-government between 1946 and 1961. The rise to power of the People's National Movement (PNM) in 1956 was a pivotal moment in Trinidadian history. Led by Eric Williams, a charismatic American-educated political leader, the party retained power in the legislature until 1986. Williams led the PNM and served as prime minister until his death in 1981. African Trinidadians provided the primary backing of the PNM, and Indian Trinidadians gravitated to the Democratic Labor Party (DLP) as tensions between the two ethnic groups continued.

In 1958, the United Kingdom created the West Indies Federation, an organization of 10 island colonies in the Caribbean that Britain hoped would become a federal government and unite the islands into one nation. The Federation failed because Trinidad and Tobago and Jamaica, the two most powerful colonies, disagreed regarding how strong the federal government should be. In 1961, Jamaica pulled out of the federation, which collapsed quickly afterward.

The failure of the Federation prompted greater British attention to the nationalist movement, and in 1960 Britain agreed to have Trinidad and Tobago participate as a sovereign nation in talks regarding U.S. bases on the islands. In 1962, Trinidad and Tobago achieved full independence and became a member of the British Commonwealth of newly independent former colonies.

In 1970, the National Joint Action Committee (NJAC) introduced the Black Power movement to the islands. Led by African Trinidadians, the party claimed that white oppression had caused the widespread poverty on the islands. Pursuing a radical change agenda, the NJAC initiated vast protests and strikes, and a sharp

divide in the military that culminated in NJAC-controlled military personnel taking control of the national arsenal. This led Williams to declare a state of emergency for 2 years.

Trinidad and Tobago sharply increased oil output in response to demand created by the Arab oil embargo in 1973. This fueled economic prosperity and helped alleviate poverty on the islands. However, the rapid drop in oil prices in the early 1980s reversed this trend and led to an economic recession.

In 1976, Trinidad and Tobago passed a republican constitution, replacing the Queen with a president as head of state.

A movement to allow Tobago more regional autonomy began in the 1970s, resulting in the creation of the Democratic Action Party (DAC) and the creation of the Tobago House of Assembly in 1980. The DAC quickly took control of the Tobago House of Assembly in the first election.

Over the decades, Williams became more powerful and eventually centralized a large portion of government activities into his direct control. His administration became mired in corruption scandals in the late 1970s, which lasted until his death in 1981. Fortunately, political stability continued and elections stayed on schedule. The PNM won the next round of elections in 1981, and George Chambers became the second prime minister since 1956. The Chambers government was beset by recession and forced to repeal subsidies created by the Williams government during the period of prosperity.

As a result of these changes, the National Alliance for Reconstruction (NAR), led by Arthur Napoleon Robinson, defeated the PNM in the 1986 elections, ending 30 years of PNM rule.

The 1980s saw the rise of a radical Islamic movement, which culminated in an abortive coup in 1990, when the Black Muslim group

Jamaat al Muslimeen stormed parliament. The group took 45 hostages, including Prime Minister Robinson, for 5 days. Robinson was shot in the leg. The Jamaat members, led by Yasin Abu Bakir, agreed to surrender after receiving a guarantee of amnesty.

The NAR began to break down when a large Indian Trinidadian contingent left the party to form the United National Congress (UNC) under the leadership of Basdeo Panday in 1988. In 1991, the PNM defeated the NAR and returned to power with Patrick Manning as prime minister. The UNC, led by Panday, served as the opposition party.

A tie between the PNM and the UNC in the 1995 elections was resolved by a coalition between the NAR and the UNC, which displaced Manning and made Panday prime minister. The UNC took full control of the government in 2000, but lost it in 2001 when three UNC members in parliament defected from the party. Manning became prime minister again, and the PNM subsequently won the 2002 elections.

In the 1980s and 1990s, Trinidad and Tobago became a major transshipment point for the drug trade. This led to alarming crime rates in the 1990s and subsequent political activism, including mass demonstrations urging government action. In response, the government reinstated the death penalty in 1999, leading to some disagreement with the Judicial Committee of the Privy Council in London regarding capital punishment.

More than 10,000 people attended a "Death March" in 2005 to protest the rising crime rates.

In 2006, former Prime Minister Panday was sentenced to 2 years in prison for failing to disclose a foreign bank account.

Chronology

- 1945 Universal adult suffrage is established.
- 1956 Eric Williams founds the People's National Movement.
- 1958 Trinidad and Tobago joins the West Indies Federation.
- 1959 Britain allows Trinidad and Tobago to govern itself. Eric Williams becomes prime minister.
- 1962 Trinidad and Tobago leaves the West Indies Federation, gains independence, and becomes a parliamentary democracy.
- 1967 Trinidad and Tobago becomes a member of the Organization of American States.
- 1968 Trinidad and Tobago and other Caribbean countries form the Caribbean Free Trade Area.
- 1970 A state of emergency is declared in response to violent "Black Power" protests.
- 1972 State of emergency ends.
- 1973 Caribbean Common Market replaces Caribbean Free Trade Area.
- 1975 Strikes in the oil, sugar, transport, and electricity sectors impair the economy.
- 1976 Trinidad and Tobago becomes a republic within the British Commonwealth. Ellis Clarke becomes president.
- 1980 Tobago is granted its own House of Assembly. Fire bombings, arsons, and political shootings trouble Trinidad and Tobago.
- 1981 George Chambers becomes prime minister after the death of Williams.
- 1986 Arthur Robinson, leader of Tobago's National Alliance for Reconstruction, wins the general election.
- 1987 Noor Hassanali becomes president.
- 1990 Islamic extremists bomb the police headquarters, take possession of the parliament building, and hold Robinson and other officials as hostages in a coup attempt.

- 1991 Patrick Manning, leader of the People's National Movement, becomes prime minister.
- 1995 United National Congress and National Alliance for Reconstruction form a coalition. Panday becomes prime minister.
- 1999 Capital punishment is reinstated.
- 2002 Patrick Manning becomes prime minister.
- 2003 George Maxwell Richards become president. Caroni, the state-owned sugar company, closes.
- 2005 A bomb detonates in Port of Spain, injuring 13. The Death March against rising crime rates draws 10,000 people.
- 2006 Panday is sentenced to 2 years in prison for an undeclared overseas bank account.

GOVERNMENT AND POLITICS

Government

Trinidad and Tobago is a parliamentary democracy and a member of the British Commonwealth, a group of former British colonies with limited governmental ties to the United Kingdom. Trinidad and Tobago became independent from the UK in 1962, leaving the Queen of England as the ceremonial head of state. A republican constitution adopted in 1976 replaced the British monarch with a president elected by parliament.

National Level

Executive Branch

The executive branch consists of the president, the prime minister, and the cabinet.

The president is elected by an electoral college consisting of all members of the Senate and the House of Representatives, chaired by the Speaker of the House. The president serves as head of state and commander-in-chief of the armed forces. Other presidential powers include awarding pardons, signing legislation, and assembling, postponing, and dissolving the parliament. He also appoints the prime minister, senators, members of commissions, and other senior officials. Most presidential powers are limited by constitutional requirements for the advice and consent of another authority, such as the cabinet, prime minister, or leader of opposition.

Candidates for president must be citizens of Trinidad and Tobago, at least 35 years old, and must prove a minimum residency within Trinidad and Tobago for 10 years prior to nomination.

The prime minister holds the most powerful position in the government. While he is officially appointed by the president, the prime minister must be the leader of the majority party or majority coalition in the House of Representatives. In cases where there is no undisputed party leader, the president is constitutionally permitted to select the person he thinks is most likely to have majority support in the House of Representatives.

The cabinet is made up of the prime minister, the attorney general, and 17 ministers selected from the House of Representatives and the Senate. Ministers are appointed by the president with advice from the prime minister. The cabinet initiates and manages policies.

Each minister is responsible for a cabinet agency and reports to parliament on that agency's activities.

Legislative Branch

The parliament, which is solely responsible for lawmaking, consists of the Senate and the House of Representatives. Generally

legislation can be introduced in either house, but finance bills must be introduced in the House of Representatives.

The Senate is composed of 31 members appointed as follows: 16 by the president with advice from the prime minister, 6 by the president with advice from the leader of opposition, and 9 by the president with guidance from economic, social, or community organizations. Senatorial candidates must be Trinidad and Tobago citizens at least 25 years old. The president has the power to dismiss senators at will.

The House of Representatives consists of 36 members elected to 5-year terms, one per constituency plus the Speaker of the House. To be qualified for the House of Representatives, candidates must be citizens of Trinidad and Tobago, at least 18 years old, and demonstrate residency in Trinidad and Tobago for 2 years prior to nomination.

Judicial Branch

As a member of the British Commonwealth, Trinidad and Tobago has maintained the Judicial Committee of the Privy Council in London as its final court of appeal. However, Trinidad and Tobago is a founding member of the Caribbean Court of Justice (CCJ), a multilateral institution designed by CARICOM states to replace the Privy Council. The move to create a Caribbean final court of appeal began in the 1970s. It was accelerated in the 1990s by a disagreement between Caribbean states and the Privy Council regarding capital punishment, which the Privy Council ruled against. While as of 2007 Trinidad and Tobago still maintains the Privy Council as the final court of appeal, it is planning to transfer to the CCJ within the next several years.

The judiciary is independent, although it is frequently challenged by the executive branch. It is headed by the chief justice, who is appointed by the president in consultation with the prime minister and the leader of opposition. The chief justice and other judges serve until the age of 65, barring death or misconduct. Other judges in the Supreme Court are selected by the president with the advice and consent of the Judicial and Legal Service Commission.

The judiciary is divided into a higher judiciary, the Supreme Court, and a lower judiciary, the Magistracy. The Supreme Court is composed of two distinct courts, the High Court of Justice and the Court of Appeal. The High Court, which is composed of the chief justice and 10 associate judges, hears criminal cases, family cases, and civil cases involving more than US\$2,500. The Supreme Court sits in Port of Spain, San Fernando, and Tobago.

The Court of Appeals, which is the highest domestic court of appeal, hears appeals from both the Magistracy and the High Court. It is composed of a maximum of nine judges, who must have either sat on the High Court for 3 years or practiced law for 15 years.

The Magistracy is led by a chief magistrate, who is assisted by a deputy chief magistrate. They manage 12 senior magistrates, 28 magistrates, and 4 temporary magistrates. All magistrates are appointed by the Judicial and Legal Service Commission and are required to have practiced law for at least 5 years. The Magistracy handles civil cases involving less than US\$2,500 and determines whether criminal cases will result in a trial. It operates in 13 magisterial districts: Arima, Chaguanas, Couva, Mayaro, Port Fortin, Princes Town, Rio Claro, San Fernando, Sangre Grande, Siparia, Port of Spain, Tobago, and Tunapuna.

The Judicial and Legal Service Commission is chaired by the chief justice. Other members include the chairman of the Public Service Commission, two former judges, and a senior member of the bar. Masters, magistrates, and judicial and legal officers are appointed

by members of the commission. Judicial and legal officers serve until the age of 60, barring death or misconduct.

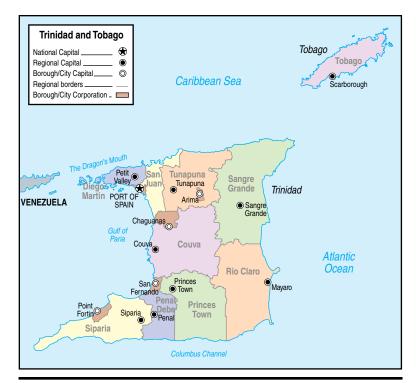
A family court was established as a pilot project in 2004, with jurisdiction at the High Court and Magistracy levels in a variety of family-related legal issues. The project is staffed by three magistrates and one senior magistrate, all of whom are designated as temporary.

Local Level

Since 1980, Tobago have autonomy from the national government with respect to island-specific issues. The Tobago House of Assembly, consisting of 12 elected members and four appointed councilors, was established in 1980 and further empowered in 1996. Its jurisdiction includes revenue collection, tourism, state lands, and other issues not directly dealing with national government. It is led by a chief secretary who is also a justice of the peace by virtue of his position.

Local government is funded by the national government through the Ministry of Finance. The ministry reviews the annual budget of each local government and makes any changes the minister deems necessary.

Trinidad and Tobago has nine regional corporations, two city corporations, three boroughs, and a ward. The regional corporations are: Couva, Tabaquite, and Talparo; Diego Martin, Mayaro and Rio Claro; Penal and Debe; Princes Town; Sangre Grande; San Juan and Laventille; Siparia; and Tunapuna and Piarco. The city corporations are Port-of-Spain and San Fernando. The boroughs are Arima, Chaguanas, and Point Fortin. Tobago is the only ward.



Administrative Divisions

Politics

Two political parties dominate the political system, the People's National Movement (PNM) and the United National Congress (UNC). There are few substantive differences between party platforms. Instead, political affiliation is typically determined by ethnicity. African Trinidadians generally support the PNM, while Indian Trinidadians generally support the UNC. Most political debates focus on allegations of corruption rather than substantive policy.

The PNM has dominated Trinidadian politics since its founding in 1958. It was displaced in 1986 by the National Alliance for Reconstruction (NAR) and in 1995 by a coalition of the UNC and the NAR in 1995. In 2001 it returned to power, where it remains in 2007.

Minor political parties include Team Unity, the National Democratic Organization, the People's Empowerment Party, and the Mercy Society. The Democratic Action Committee (DAC) is a small party only active on Tobago.

Political Parties

People's National Movement (PNM). Founded in 1956 and primarily backed by African Trinidadians, the PNM has traditionally dominated politics. Its platform includes market-based economics and social and infrastructure development.

United National Congress (UNC). Founded in 1989 and primarily backed by Indian Trinidadians, this opposition party also supports market-based economics and social and infrastructure development.

Foreign Relations

United States

Relations between the United States and Trinidad and Tobago are friendly. Regional interests of the United States include generating growth in investments and trade, securing energy resources, and providing help with drug prohibition, health, and legal affairs. The United States is concerned with improving political and social stability in Trinidad and Tobago.

U.S. bilateral funding amounting to roughly US\$3 million was terminated in 2003 when Trinidad and Tobago refused to sign

a bilateral non-surrender agreement with the United States in compliance with the American Service Members Protection Act (ASPA), which states that International Criminal Court (ICC) member states will not prosecute U.S. soldiers at the ICC.

Trinidad and Tobago's military receives major funding from the U.S.-backed International Narcotics Law Enforcement and Traditional Commander's Activities funds. Trinidad and Tobago also receives other funding from U.S. military, law enforcement, and health authorities. Trinidad and Tobago also receives funding from the U.S. Caribbean Basin Initiative (CBI).

Trinidad and Tobago and the United States have treaties for bilateral investment, intellectual property rights protection, extradition, and mutual legal assistance, and a maritime cooperation agreement.

Caribbean Community and Common Market

Trinidad and Tobago is a leading member of the CARICOM, a group of Caribbean states with the goal of unifying the region in an organization similar to the European Union.

CARICOM was founded by the Treaty of Chaguaramas in 1973. Other member states include Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Suriname. Associate members include Anguilla, Bermuda, the British Virgin Islands, the Cayman Islands, and the Turks and Caicos Islands.

CARICOM is the primary forum through which Trinidad and Tobago relates to the other member states. Trinidad and Tobago is a leading advocate of the CARICOM Single Market and Economy (CSME), a double initiative to form CARICOM states into a common market, then a single economy with one currency and a cen-

tral economic policy institution. The Caribbean Single Market initiative was launched successfully in 2006. Talks geared at forming the single economy initiative continued in 2007.

Organization of American States

Trinidad and Tobago is an active member of the Organization of American States (OAS). It has hosted OAS meetings on energy, education, terrorism, and security.

Venezuela

Relations between Venezuela and Trinidad and Tobago became rocky when Hugo Chavez came to power in Venezuela in 1998. Chavez has criticized Trinidad and Tobago for supporting the U.S.-led Free Trade Area of the Americas (FTAA), and criticized long-time Prime Minister Patrick Manning for differences of opinion regarding relations with the United States.

The two nations compete for energy dominance in the Caribbean. Trinidad and Tobago has refused to sign Venezuela's PetroCaribe initiative, aimed at replacing multinational energy companies from the Caribbean with Venezuelan state-owned corporations. Manning has warned other Caribbean nations against signing the deal as well. At the same time, however, Venezuela and Trinidad and Tobago have a bilateral trade agreement and are cooperating on some energy ventures.

International Organizations

Trinidad and Tobago participates in the following list of international organizations and alliances:

- African, Caribbean, and Pacific Group of States (ACP)
- Association of Caribbean States (ACS)

- Commonwealth (C)
- Caribbean Community and Common Market (CARICOM)
- Caribbean ACP States (CARIFORUM)
- Caribbean Development Bank (CDB)
- Food and Agricultural Organization (FAO)
- Inter-American Development Bank (IADB)
- International Bank for Reconstruction and Development (IBRD) (World Bank)
- International Labor Organization (ILO)
- International Monetary Fund (IMF)
- International Maritime Organization (IMO)
- International Criminal Police Organization (Interpol)
- International Olympic Committee (IOC)
- Latin American Economic System (LAES)
- Organization of American States (OAS)
- Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL)
- United Nations (UN)
- United Nations Conference on Trade and Development (UNCTAD)
- United Nations Educational, Scientific, and Cultural Organization (UNESCO)
- United Nations Industrial Development Organization (UNIDO)
- World Health Organization (WHO)
- World Trade Organization (WTO)

Non-Governmental Organizations

Trinidad and Tobago participates in the following select list of international non-governmental organizations:

- International Criminal Court (ICCt)
- International Confederation of Free Trade Unions (ICFTU)
- International Red Cross and Red Crescent Movement (ICRM)
- International Federation of Red Cross and Red Crescent Societies (IFRCS)

Corruption

The government is challenged by the presence of significant corruption. Numerous high-profile corruption cases and the growing problem of narcotics trafficking through the country are two challenges the government faces.

The legislature is taking active measures to stop corruption. The Prevention of Corruption (Amendment) Bill of 2001 amended previous corruption legislation from 1987. The purpose of the amendment was to decrease the occurrence of corruption and create the Integrity Commission to examine corruption claims. The Integrity in Public Life Act requires public officials to report their assets, income, and liabilities to the Integrity Commission. Trinidad and Tobago signed the United Nations Convention against Corruption in 2003 and ratified it in 2006.

ECONOMY

Trinidad and Tobago have a thriving free-market economy that relies heavily on energy revenues from its massive oil and natural gas deposits. The economy has experienced significant annual growth rates since the mid 1990s, and the government is focused

on diversification to reduce the nation's dependency on oil revenues. Diversification efforts include significant industrial and downstream natural gas infrastructure development.

The government intends to make Trinidad and Tobago a developed nation by 2020, and is working with the World Bank and the International Monetary Fund to achieve this goal, with the help of a World Bank Country Assistance Strategy to the effect of US\$50.2 million between 1999 and 2009.

Trinidad and Tobago is the financial center of the English Caribbean. Most banking services available in the United States are available there also. Six commercial banks operate in Trinidad and Tobago, one of which is state-owned. The three largest banks control more than half of the sector's total assets. More than 70 credit unions operate in the country. Commercial banks run 125 branches and thousands of ATMs. There are no foreign exchange controls.

The Trinidad and Tobago Stock Exchange has a market capitalization of US\$7.6 billion and trades 30 companies. It trades jointly with the exchanges of Jamaica, Barbados, Dominican Republic, and the Bahamas, under the funding and supervision of the Inter-American Development Bank.

The strategic location of Trinidad and Tobago, its strong human resources, and its extensive trade agreements make it a hub for trading with South, Central and North America.

The Trinidad and Tobago dollar was pegged to the U.S. dollar until 1993, when the government elected to float the currency. The exchange rate now stands at US\$1=TT\$6.35; it has been fairly stable since 2002. The central bank recognizes the need to curb inflationary pressures caused by rapid GDP growth, especially in the energy sector.

Economic Statistics

Gross Domestic Product (GDP)

Official Exchange Rate US\$14.15 billion (2007) **Purchasing Power Parity** US\$22.93 billion (2007)

Per Capita US\$21,700 **Growth Rate** 5.5 percent **Inflation Rate** 7.6 percent US\$6.4 billion **Budget Revenues Budget Expenditures** US\$6.2 billion **National Debt** US\$3 billion

Unemployment Rate 6 percent

Imports, Total Value US\$6.577 billion f.o.b. **Commodities** Machinery, transportation

equipment, manufactured goods,

food, live animals

United States 27.7%. Venezuela **Partners**

13.3%, Brazil 11.8%, Japan 5.5%,

Canada 4.2%

Exports, Total Value US\$14.13 billion

Commodities Petroleum and petroleum products,

> petrochemicals, steel products, fertilizer, sugar, cocoa, coffee,

citrus, flowers

United States 68.8%, Jamaica **Partners**

5.5%, Barbados 2.9%

Labor Force 615,400

Composition Agriculture 4%, manufacturing,

mining and quarrying 12.9 %,

construction and utilities 17.5%.

services 65%

Resources

At 990 million barrels (2004), the oil reserves of Trinidad and Tobago are the largest in the Caribbean.

Trinidad and Tobago's natural gas reserves are among the largest in the Western Hemisphere at 733 billion cubic meters (25.9 trillion cubic feet).

Like most industrialized nations with coastlines, Trinidad and Tobago experiences significant marine pollution from domestic, agricultural, and industrial sources. Rivers and streams are popular targets for garbage disposal, which eventually flows into the sea. Pesticides, fertilizer, and sewage from farming and animal husbandry cause significant pollution, as do industrial wastes such as cooling water, lubricating oils, and industry-specific chemicals.

Industry

Energy

The energy sector is the largest industry in Trinidad and Tobago. It provides 42.9 percent of GDP and 46.1 percent of government revenues. The sector is dominated by the production and refinement of natural gas. Production and refinement of petroleum is the other portion of the sector.

Natural gas production in Trinidad and Tobago is on the rise due to increased foreign investment and diversification efforts. In 2004, production hit 990 billion cubic feet, up 14 percent from the previous year. The nation is now the largest supplier of liquid natural gas (LNG) to the United States.

The largest producer of LNG in Trinidad and Tobago is Atlantic LNG, which runs four LNG trains for liquidizing natural gas

and exporting it. The trains are located on the southwest coast of Trinidad in Point Fortin.

Trinidad and Tobago has a vast and sophisticated pipeline network connecting its oil and gas fields to onshore loading sites. The natural gas Cross Island Pipeline (CIP), a 76.5 kilometer (47.5 mile), 142.2 centimeter (56 inch) diameter line, stretches from Beachfield, Guayaguayare to Point Fortin. It is owned by the Trinidad and Tobago Natural Gas Company (NGC), a government-created entity that operates a 624-kilometer (387.7 mile) pipeline network for natural gas.

Average oil production in the first half of 2006 was 181,000 barrels per day, with BP Trinidad and Tobago (BPTT) the largest oil producer. The opening of the Greater Angostura field by BHP Billiton in 2005 has dramatically increased production and is expected to make BHP Billiton the largest oil producer.

Tourism

The number of tourists visiting Trinidad and Tobago from Europe and the United States increases annually, with Tobago specializing in luxury accommodations and ecotourism, while Trinidad's market share traditionally comes from business.

Petrochemical

Trinidad and Tobago is a leading producer of methanol, anhydrous ammonia, urea, and a number of other petrochemical products. Several multinational corporations have established petrochemical plants for methane derivatives, as well as facilities for liquidizing natural gas for export. The sector experienced 27.4 percent growth in 2005, reflecting the opening of the Atlas Methanol and Nitrogen 2000 plants.

Metals

Iron and steel production in Trinidad and Tobago spiked in 2002 thanks to a partnership with Canadian corporation ISPAT, which developed the Direct Reduced Operation Module that increased efficiency in Direct Reduced Iron (DRI) production.

The government is actively pursuing the development of an aluminum industry. In 2006, Alcoa signed an agreement in principle with Trinidad and Tobago to build an aluminum smelter in the Chatham area of southwestern Trinidad. The project has encountered significant political opposition from environmental groups.

Food and Beverage

There are numerous food and beverage companies in Trinidad and Tobago, operated by local concerns and 4 multinational corporations (Coca-Cola, Nabisco Royal, Nestle Trinidad, and Lever Brothers West Indies). The sector employs more than 13,000 workers and a wide array of sophisticated technology. Some production lines are fully automated. The sector contributed strongly to the 8.6 percent growth experienced in manufacturing in 2005.

Marine

Many yacht services companies operate in Trinidad and Tobago, targeting business visitors and tourists. The Yacht Services Association of Trinidad and Tobago (YSATT) works to develop and expand the industry.

Information/Communication Technology

There is a large and growing technology sector in Trinidad and Tobago that leads the Caribbean in telecom infrastructure.

Utilities

Electricity

Trinidad and Tobago derives its electrical power from the 634 megawatt Point Lisa natural gas power plant on Trinidad. Powergen, the consortium of BP, Mirant, and the Trinidad and Tobago Electricity Commission that operates the facility, has announced that it will increase capacity by 208 megawatts. This will bring the plant's total installed capacity to 842 megawatts. The plant is one of the largest in the Caribbean.

Water

Trinidad and Tobago is developing access to safe drinking water for all its residents. Currently, 26 percent have access to drinking water full-time, and 92 percent, at least weekly.

Water supply and sewage disposal are handled by the state-owned Water and Sewerage Authority (WASA), which is executing a government-funded development program to raise the number of residents with full-time access to drinking water to 36 percent. One initiative involves replacing portions of the pipeline infrastructure, some sections of which date to the 1930s.

The sanitation sector is developing as well. Sewage systems are provided to 30 percent of the population, 58 percent use septic tanks, 10 percent use pit latrines, and 2 percent are not covered.

A new wastewater plant in Port of Spain is expected to significantly increase the efficiency of the sewage infrastructure.

The new Draft Water Resources Management Policy, a legislative act from 2005, is expected to help WASA better manage water

and sanitation issues by unifying the large number of sub-sectors related to water management.

Agriculture

Sugar cane is the foremost agricultural product in Trinidad and Tobago. Up until 2003, it was mostly raised by Caroni Limited, the nation's largest agribusiness. In 2003, however, Caroni shut down sugar production and restructured to focus on refinement. Sugar production fell in 2005 because of excessive rainfall and cane fires, as well as the conversion of cane fields to other agricultural uses. As a whole, agriculture shrunk by 0.5 percent in 2005.

Foreign Investment

A stable government, fair judicial process, and friendly legal environment make Trinidad and Tobago an attractive target for foreign investors, despite some problems with corruption. There is no legal discrimination against foreign firms, and expropriation without compensation is illegal. Foreigners seeking to purchase more than 30 percent of a publicly held business must obtain a permit; beyond that there is no regulation of foreign business ownership.

Total annual foreign direct investment (FDI) to Trinidad and Tobago has averaged US\$700 million since 1995.

Economic Outlook

As long as the government is able to curb inflationary pressures, decrease the non-energy deficit, and continue diversification, the prospects of the Trinidad and Tobago economy are strong. Energy output is likely to continue to increase, foreign investment and infrastructure development will continue, and economic output is likely to stay strong.

THREAT

The threat environment in Trinidad and Tobago is fairly benign. There is little anti-U.S. sentiment and a low threat of terrorist attacks against Americans. Crime in Trinidad and Tobago is high and is the most serious threat to U.S. personnel

Crime

Most criminal incidents are related to the growing problem of illegal drug trafficking. Visitors should exercise caution and good judgment, as in any large urban area when visiting Trinidad and Tobago, particularly when traveling from Trinidad's Piarco Airport, especially after dark. Areas to avoid in Trinidad include Laventille, South Belmont, and scenic rest stops, walking across the Queen's Park Savannah, downtown Port of Spain, as these are areas where Americans remain particularly vulnerable to pocket picking and armed assaults. Holiday periods, especially Christmas and Carnival; often see an increase in crime. Visitors to Trinidad and Tobago are also advised to be cautious when visiting isolated beaches or scenic overlooks, which are favored robbery sites. Valuables, including travel documents, should not be left unattended in parked cars, particularly in parking lots, as several thefts have been reported.

Travel Security

American citizens traveling to or residing in Trinidad and Tobago should avoid large crowds and demonstrations. Non-violent demonstrations occur on occasion, but widespread civil disorder is not typical. The downtown area of Port of Spain experienced four bombings between August and November 2005. Americans living or visiting Port of Spain are advised to exercise caution, particularly when in crowded urban areas.

Terrorism

Be aware of the global risk of indiscriminate terrorist attacks, which could take place in public areas, including those frequented by foreigners. Historically all incidents have been reported as being domestically-motivated and the current threat level is described as Low.

Drug Trafficking

As is much of the region, Trinidad and Tobago's location is considered by drug traffickers to be of strategic value, mainly because of its proximity to the Venezuela coast. Tobago is just northeast of Trinidad, so the republic's location makes it a strategic transshipment point. Payments for services at transshipment points are being made in kind (e.g., cocaine, heroin, and marijuana). These substances are available locally and consequently have threatened the tourism in the region.

Major Intelligence Services

There is no significant foreign intelligence threat to U.S. persons.

ARMED FORCES

Defense Force Organization

The president of Trinidad and Tobago is the Commander-in-Chief of the Trinidad and Tobago Defense Forces. The Defense Forces consist of the ground force, air guard, coast guard, police, and customs and immigration services.

In July of 2006 the ground force, originally named the Trinidad and Tobago Regiment, was renamed the Trinidad and Tobago Army. Although the TTO Army is small, even for a nation the size

of TTO, in an emergency its personnel numbers can be supplemented by personnel from the 7,000-member TTO police force. Conversely, as planned under its new structure, army personnel can also be used in support of police operations.

Key Personnel

Position	Name (Date Assigned)
Minister of National Security	Martin Joseph (Nov. 2003)
(Secretary of Defence)	
Chief of Staff, Trinidad and	Edmund Dillon (Aug. 2006)
Tobago Defense Force	
Commander, Coast Guard	Jeewah Ramoutar
Commander, Air Guard	Capt. Kent Moore

Military Statistics

Total Army Strength	2,964
Availability,	
Males Fit for Service Age 18 – 49	215,310
Army Reserves Strength	*Not Available
Military Expenditures	TTD351.2 million
	(≈US\$56.192 million)

^{*}Reserves system is in development

Army

Mission

Traditionally, the role of the Trinidad and Tobago Regiment was to protect the territorial integrity and sovereignty of Trinidad and Tobago. With its renaming and reformation into an army, it will keep that traditional mission, but also increase its in law enforcement and counter-drug, and assume the new mission of assisting the government in natural disaster operations. The Army will be expected to conduct the natural disaster relief mission not only within Trinidad and Tobago territory, but throughout the Caribbean region. This new natural disaster relief role will place extra operational requirements upon the engineer battalion.

In the past the Army, as the Trinidad and Tobago Regiment, conducted counterinsurgency operations, such as their successful defeat of the attempted coup in 1990. Although counterinsurgency is not currently listed as one of their primary missions, they are working to maintain capabilities in this area.

Organization

The Army's personnel are formed into two infantry battalions, a logistics battalion, an engineer battalion, a reserve infantry battalion, and Special Forces Company. These units are subordinate to the Ministry of National Security

The standard Army infantry battalion structure is shown below.

The highest echelon for tactical maneuver within the Trinidad and Tobago Army is the battalion. Each battalion has three rifle companies and combat support company.

The Special Forces company, though not as highly trained as U.S. Special Forces, is still a very capable unit. In a national emergency, the Army can also call for assistance from the TTO Police's Special Branch.

The TTO Police's Special Branch is trained in intelligence operations, personal security for Prime minister and other TTO government officials and also counter organized crime and drug operations.

The Special Anti-Crime Unit of Trinidad and Tobago, or SAUTT, is a third unit, which can be called upon by TTO Army Special Forces. The SAUTT is commanded by former TTOS regimental commander Brigadier Peter Joseph.

The SAUTT is a vetted unit trained in a myriad of special operations. Its personnel are a select group drawn from the police, army, prison officers, and the coast guard.

The SAUTT has its own budget, drawn directly from the National Security Ministry budget.

Personnel

Service in the Army is voluntary; conscription was dropped in 2001. Rank structure is similar to that of the U.K. Army.

Training

Trinidad and Tobago Army personnel are trained by the United Kingdom, United States, Canada, and Brazil. They participate in the annual TRADEWINDS exercise, an exercise that involves over 500-personnel from the United States, United Kingdom, France, the Netherlands, and all CARICOM members including Suriname, the Dominican Republic, and the Puerto Rico.

Disposition

Unit Name	Location
Defense Force & Army HQ	Chaguaramas (western Trinidad)
Battalion Base (HQ)	Camp Ogden, St. James (west of Port of Spain)
Battalion Base (HQ)	Teteron Barracks, St. James (west of Port of Spain)
Small Base (NFI)	Camp Comuto, (near Arima, central Trinidad)
Small Base (NFI)	Camp at Signal Hill (on Tobago)

Unit Name	Location
Planned engineer bn. base	Felicity (west-central Trinidad)
Planned U/I bn. base	La Romain (near city of San Fernando)
Planned training facility	Forres Park (near city of San Fernando)
Planned U/I unit relocation	To Tobago at Camp Hope

Equipment

Armor

The TTO Army has no armored vehicles.

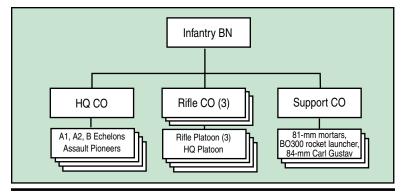
Artillery

The TTO Army has no tube artillery.

Transport (Men and Material). Various types and sizes.

Infantry Weapons

- 84-mm recoilless rifle Carl Gustav
- 82-mm Rocket Launcher B-300
- 81-mm mortar L16A1
- 60-mm mortar M2
- 7.62-mm rifle L1A1 SLR
- 5.56-mm assault rifle M16
- 5.56-mm assault rifle Galil
- 9-mm submachinegun Sterling L2A3
- 7.62-mm light machinegun Bren L4
- 7.62-mm general purpose machinegun L7A1
- 7.62-mm general purpose machinegun M60
- 5.56-mm section assault weapon Negev



Infantry Battalion

Air Guard

Background

The Air Guard is the aerial arm of the Trinidad and Tobago Defense Force. It was formed in 1966 and originally part of the Coast Guard, named the Air Wing of the Coast Guard. The unit was formed to perform surveillance and search and rescue in support of ground forces. In 1977, it separated from the Coast Guard and became its own wing; in 2005 it was renamed the Air Guard. The Air Guard continues to expand; it is expected to increase its helicopter inventory in the near future.

Mission

The mission of the Air Guard is to provide enhanced aviation support to law enforcement agencies, improved aerial search and rescue, and surveillance. Secondarily, the Air Guard provides aviation support for naval, land-based, and disaster relief operations.

Equipment

Туре	Quantity
Cessna 310	1
Cessna 402, utility	1
Panther Navajo, utility	2
C-26A Metro III, utility aircraft	2

Coast Guard

Organization

The Trinidad and Tobago Coast Guard maintains four operational bases located at Staubles Bay, Trinidad; Cedros Bay, Trinidad; Galeota Point, Trinidad; and Scarborough, Tobago. The Special Naval Unit (SNU) is co-located at the Headquarters base in Staubles Bay. There are approximately 1,300 personnel and 25 vessels in the Coast Guard fleet.

Order of Battle

Surface Vessels

Class	Length	Type	Quantity
ISLAND	61.0 m	Offshore Patrol Craft	1
CG 40	40.0 m	Patrol Craft	2
DAUNTLESS	12.0 m	Patrol Craft	3
INTERCEPTOR	10.0 m	Patrol Craft	2
WASP	20.0 m	Patrol Craft	2
WASP	17.0 m	Patrol Craft	5
USCG POINT	25.0 m	Patrol Craft	4

Port Facility Security Unit

The Marine Ship Safety and Port Facility Unit (MSSPFSU) was formed as a branch of the Trinidad and Tobago Coast Guard in accordance with the Trinidad and Tobago Government obligation as a signatory to the 1974 International Convention for the Safety of Life at Sea (SOLAS); the MSSPFSU entered into force on 25 May 1980.

The Convention, which applies to ships of 500 gross tons and above, provides standards for the marine safety of international shipping. In December 2002 new amendments to the SOLAS Convention were adopted and a new International Ship and Port Facility Security (ISPS) Code was introduced with respect to maritime security for ships and port facilities.

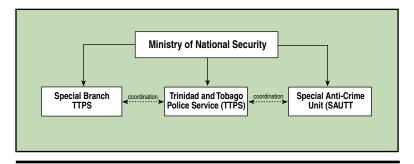
On 6 March 2004 Trinidad and Tobago agreed to establish the Marine Ship Safety and Port Facility Security Unit of the Trinidad and Tobago Coast Guard under the Maritime Services Division, Ministry of Works and Transportation.

Police Forces

Organized as the Trinidad Constabulary Force in the early decades of the 20th century, the Trinidad and Tobago Police Service was known as the Trinidad and Tobago Police Force from 1938 to 1965. It assumed its present name under the Police Service Act of 1965, which is the legal basis for the mission, staffing, pay and allowances, and retirement system.

Structure and Organization

The Police Service is overseen by the Ministry of National Security. Headed by a Commissioner of Police, assisted by three deputy commissioners, all who are appointed by the president on



Police Service Organization

the advice of the prime minister. The Deputy Commissioner of Administration, supervises finance, personnel, training, the highway patrol, in the northern part of the country, transport, telecommunications, and mounted branch. The Deputy Commissioner for Operations is responsible for police units throughout the country and the prevention and detection of crime. The country is divided into nine divisions under two branches; the Northern Branch, headquartered in Port-of-Spain, and the Southern Branch, headquartered in San Fernando.

Personnel

Total Police force strength is approximately 7,000.

Uniforms and weapons

The police uniform consists of a gray shirt and khaki shorts or a white tunic and blue slacks, topped by a white helmet in the day-time, and a blue tunic and blue peaked cap at night.

APPENDIX A: EQUIPMENT RECOGNITION

INFANTRY WEAPONS

5.56-mm Galil SAR



Type
Cartridge
Effective Range
Cyclic Rate of Fire
Operation
Feed Device
Weight Unloaded
Overall Length

Short assault rifle (SAR) 5.56 x 45 mm 300 m 575 rounds per minute

Gas, selective fire (semiautomatic, automatic) 35- or 50-round detachable box magazine

4.58 kg

744.2 to 990.6 mm (extendable stock)

5.56-mm Assault Rifle M16A1



Caliber 5.56 x 45 mm Effective Range 800 m

Rate of Fire

Cyclic 700 rounds per minute
Automatic 60 to 80 rounds per minute
Single-Shot 40 to 50 rounds per minute

Method of Operation Gas blowback direct action, air-cooled, selective

fire (Automatic, single-shot) (3-round burst

available)

Feed Device 20- or 30-round detachable box magazine

Weight (Loaded) 3.85 kg (20-round magazine)

Overall Length 990 mm

NOTE: optional bayonet (knife and wire cutter) and under-barrel grenade launcher

available.

5.56-mm Light Machinegun Negev



Caliber5.56 x 45 mmEffective RangeProbably 800 m

Cyclic Rate of Fire Selectable, 700 to 850 rounds per minute or

>1,000 rounds per minute

Operation Gas action, selective fire (semi- or automatic) **Feed Device** 150- or 200-round assault drum; adaptable to

use 200-round belts fed from an assault pouch or ammunition box, Galil 35-round magazines, or

M16 magazines

Weight Empty, with Bipod 7.6 kg

Overall Length

Long Barrel, Stock Extended
Long Barrel, Stock Folded
Short Barrel, Stock Extended
Short Barrel, Stock Folded
1,020 mm
780 mm
890 mm
680 mm

NOTE: The Negev can be operated as a light machinegun or squad automatic weapon (with use of magazine, and bipod/tripod removed). Vehicle, helicopter, and naval mounts are available for this weapon. Airborne weapons may be fed from a 380- or 750-round ammunition box. The gas vent can be closed to allow firing of rifle grenades. The shorter barrel is used on the Commando version of Negev (shown above). A handle is added to the left side, forward the hand grip. Quick-change barrels are interchangeable.

7.62mm Self-loading Rifle L1A1 SLR



Caliber 7.62 x 51 mm Range

Effective 600 m Maximum 3,700 m

Cyclic Rate of Fire650 rounds per minuteOperationGas, selective fireFeed Device20-round box magazine

 $\begin{tabular}{ll} Weight Unloaded & 4.3 kg \\ Length Overall & 1,143 mm \end{tabular}$

NOTE: The L1A1 is based on the Galil.

7.62-mm Rifle Model FN FAL



7.62 x 51 mm

Caliber
Range
Effective
Maximum
Cyclic Rate of Fire
Operation
Feed Device
Weight Unloaded
Length Overall

600 m 3,700 m 650 rounds per minute Gas, selective fire 20-round box magazine 4.3 kg 1,100 mm

7.62-mm Light Machinegun Bren L4A1



Caliber 7.62 x 51 mm NATO

 Maximum
 3,650 m

 Effective Range
 800 m

Cyclic Rate of Fire450 to 500 rounds per minuteOperationGas action, automatic fireFeed Device30-round box magazine

Weight Unloaded 8.75 kg Overall Length 1,082 mm

NOTE: The L4A1 is a Bren Mk 3 (pictured above) modified to fire 7.62-mm NATO ammunition. The Bren Mk 3, modeled after the Czechoslovak ZB26, fires 7.70- x 56R-mm rounds.

7.62-mm General Purpose Machinegun L7A2



Caliber Cyclic Rate of Fire

Operation Feed Device Weight Overall Length 7.62 x 51 mm NATO
750 rounds per minute, but adjustable to up to
900 rounds per minute
Gas action, automatic fire
Disintegrating metal-link belt
10.9 kg
1,232 mm

7.62 mm M60 General Purpose Machinegun



Type General purpose machinegun **Caliber** 7.62- x 51-mm NATO

Range

Maximum3,750 mEffective Range With Bipod1,100 mEffective Range With Tripod1,800 m

Cyclic Rate of Fire 500 to 650 rounds per minute

System of Operation Gas, automatic
Feed Device Disintegrating link belt

Weight Loaded 11.1 kg
Overall Length 1.26 m

9-mm Submachinegun Sterling L2



Cartridge

Effective Range

Semiautomatic Fire

Automatic Fire Cyclic Rate of Fire

Operation Feed Device

Weight Unloaded Length Overall 185 m

Approximately 90 m

550 rounds per minute

9- x 19-mm Parabellum

Blowback, selective fire 34-round box magazine

2.7 kg 711 mm

Using the Sterling Submachinegun: (1) Pull the operating handle to the rear [the bolt will remain to the rear as the weapon fires from an open-bolt]. (2) Moving the change lever [located on the left side of the pistol grip] to the letter **S** to engage the safety. (3) Insert and lock in place a loaded 34-round magazine into the magazine well on the left-side of the receiver. (4) Move Safety to letter **R** for **SEMI** or **A** for **AUTO**. STERLING IS READY TO FIRE.

ARTILLERY

81-mm Mortar L16A1, A2



Crew; Section Size

Range

Rates of Fire

Sustained Normal

Burst

Elevation Limits

Traverse Limits

Weight Empty Tube Length 3; 5

5,650 m

10 rounds per minute

15 rounds per minute 20 rounds per minute

+45 to +85 degrees

5.5 to 18.0 degrees left or right at +45 to +85

degrees respectively

38.3 kg 1,280 mm

ANTIARMOR

84-mm Recoilless Gun Carl Gustaf M3



Type

Effective Ranges

HEAT HEDP

ΗE

Flechette

Types of Rounds Armor Penetration

Launcher Weight

Overall Length

Multipurpose manportable shoulder-fired recoilless weapon.

Up to 700 m

Hardened targets 500 m; troop in the open 1,000 m

Up to 1,250 m

100 m

HEAT, HEDP, HE, flechette, illumination, smoke

400 mm of RHA

10 kg

1,065 mm

82-mm Light Anti-armor Weapon B-300



Type Manportable shoulder-fired semidisposable Effective Range 400 m

Types of Rounds HEAT, improved HEAT, HEFT (HE follow-through)

Armor Penetration >400 mm at 65-degree graze angle

Launcher Weight Loaded 8 kg **Overall Length Loaded** 1.35

NOTE: Rounds are carried in sealed disposable containers. To load, a container with round is simply coupled to the aft end of the launcher. A variety of sight options are available. The hit probability at 400 m is reported to be 50 percent.

AIRCRAFT

Maritime Patrol Aircraft Fairchild C-26A Metro III



 Mission
 Counternarcotics surveillance

 Crew
 4

 Maximum Cruising Speed
 246 kn

 Range
 Approximately 1,500 nmi with fuel reserves

Service Ceiling 7,620 m

Mission Equipment X-band surveillance radar, FLIR electro-optical imaging system, laser rangefinder

Maximum Takeoff Weight 7,484 kg Weight Empty 4,309 kg

Length x Wingspan x Height 18.09 x 17.37 x 5.08 m

Cessna 172M Skyhawk



Mission Seating Maximum Cruising Speed Range

Service Ceiling Maximum Takeoff Weight Weight Empty Length x Wingspan x Height Maritime patrol, liason 4 including pilot 120 kn at 2,440 m

Approximately 500 nmi at 3,050 m with standard

fuel, 45-minute reserves 3,960 m

1,089 kg 650 kg

8.20 x 10.92 x 2.68 m

Cessna 310



Mission
Seating
Maximum Cruising Speed
Range, Maximum Fuel
Service Ceiling
Maximum Takeoff Weight
Weight Empty

Length x Wingspan x Height

Patrol, communications Up to 6 including pilot

195 kn (75-percent power, at 2,285 m)

1,534 nmi 6,020 m 2,495 kg 1,523 kg

9.74 x 11.25 x 3.25 m

Cessna 402 Maritime Patrol Aircraft



Mission
Seating
Maximum Cruising Speed
Range, Maximum Fuel
Service Ceiling
Maximum Takeoff Weight
Weight Empty
Length x Wingspan x Height

Patrol, communications
Up to 10 including pilot
213 kn (72-percent power, at 6,100 m)
Capable of over 1,200 nmi at econ. cruising speed
8,200 m
3,107 kg
1,849 to 1,914 kg, depending on variant
11.09 x 13.45 x 3.49 m

Colemill Panther Navajo



Mission
Seating
Maximum Cruising Speed
Range, Maximum Fuel
Service Ceiling
Maximum Takeoff Weight
Weight Empty
Length x Wingspan x Height

Patrol, communications 6 standard, including pilot; option for up to 8 248 kn (75-percent power, optimum altitude) Capable of over 1,000 nmi at econ. cruising speed 8,015 m 2,948 kg 1,810 kg 9.94 x 13.00 x 3.96 m

Sikorsky S-76A



Role Search and rescue, surveillance

Crew; Passengers 2; 12

Maximum Dash Speed 155 kn

Range 439 nmi, no reserves

Endurance

Maximum Operating Altitude 4,575 m

Main Rotor

Number of Blades 4 Diameter 13.4 m

Tail Rotor

Number of Blades 4
Diameter 2.4 m
Maximum Takeoff Weight 5,306 kg

Fuselage Length x Width x Height 13.2 x 2.1 x 3.6 m

NOTE: The Trinidad and Tobago Š-76 helicopters belong to the National Helicopter Service, an agency under the Ministry of National Security. They have civilian markings. The Coast Guard uses them for search and rescue and surveillance duties.

Non-rigid Airship Aeros 40B



Mission Surveillance

Seating Up to 5 including pilot

Maximum Level Speed 44 kr

Endurance 6:42 at 45-percent power; up to 24 hours possible

Maximum Certified Altitude2,885 mUseful Load676 kgWeight Empty1,914 kg

Length x Max. Diameter x Height 43.59 x 10.60 x 13.35 m

NOTE: Operated by the Special Anti-crime Unit of Trinidad and Tobago. Electro-optical/infrared sensor package carried externally.

SHIPS

ISLAND Class PS



Type

LOA x Max. Beam x Max. Draft Displacement, Full Load

Complement

Speed, Full Power

Range

Guns

Equipment

Embarked Troops

Surface-Search Radar System

Sonar Systems Navigation

Side-Scan Active Search

Large patrol ship 59.5 x 10.9 x 4.3 m

1,260 metric tons

39

16 kn

7,000 nmi at 12 kn

1x 20-mm x 85 AA gun, 2x 7.62-mm machineguns

2x Gemini or Searider RIBs

25

KH-1006(2)

MS 45 echo sounder SU-2 (hull-mounted)

KARLSKRONA CG-40 Class WPC



LOA x Max. Beam x Max. Draft40.6 x 6.7 x 1.6 mDisplacement, Full Load200 metric tonsComplement22 plus 9 spare berths

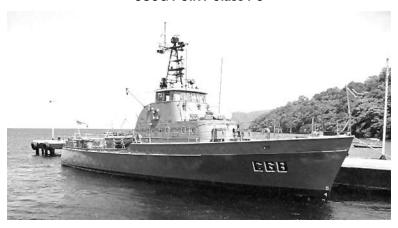
Speed, Full Power 31 kn

Range 2,000 nmi at 15 kn

Guns 1x 20-mm x 70, 1x 40-mm x 70

Nav./Surface-Search Radar System Decca-1226 Sonar System SQ3D/SF

USCG POINT Class PC



LOA x Beam x Draft 25.3 x 5.2 x 1.8 m
Displacement (full load) 66 metric tons
Complement 10

Speed, Full Power 23.5 kn Economical Speed 8 kn

Range 1,500 nmi at 8 kn

Guns 1x twin 7.62-mm x 62 machineguns

Surface-Search Radar System SPS-64

Souter Wasp 20 MK I WPB



LOA x Max. Beam x Max. Draft Displacement, Full Load Complement Speed, Full Power Range at Max. Sustained Speed Guns

Navigation Radar System

20 x 5 x 1.5 m 32 metric tons 6

36 kn

330 nmi at 30 kn

1x twin 7.62-mm machinegun (1x 30-mm may also be fitted)

Decca 150

Souter Wasp 17 WPB



LOA x Max. Beam x Max. Draft
Displacement, Full Load
16.8 x 4.2 x 1 m
19.3 metric tons

Complement8Speed, Full Power32 knSpeed, Maximum Sustained25 kn

Guns Possibly 1x 20-mm or 1x twin 7.62-mm

machinegun

Navigation Radar System Decca 150

MONARK PROTECTOR 42 (SWORD) Class



LOA x Max. Beam x Max. Draft Displacement, Full Load

Complement

Speed, Maximum Sustained

Range Guns

Surface-Search Radar System

13 x 4.5 x 0.6 m 17 metric tons

20 kn

500 nmi at 20 kn

1x 7.62-mm machinegun

Decca 150

SEAARK DAUNTLESS 40 Class WPB



LOA x Max. Beam x Max. Draft Displacement, Full Load Complement

Speed, Full Power Range Guns

Navigation Radar System

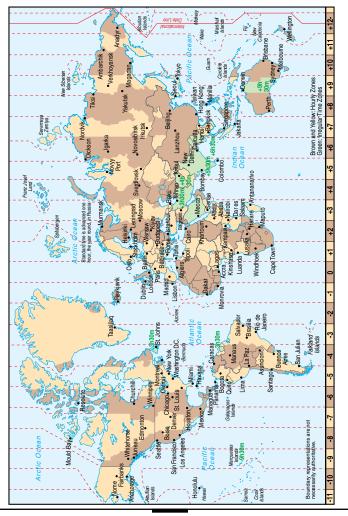
12.2 x 4.3 x 1.3 m 11 metric tons 5

28 kn

600 nmi at 18 kn 1x 7.62-mm machinegun

Raytheon R-40X

APPENDIX B: INTERNATIONAL TIME ZONES



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
	•				

Country	UTC	Eastern	Central	Mountain	Pacific
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
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	+4.0 H +5.0 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

Country	UTC	Eastern	Central	Mountain	Pacific
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
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

Country	UTC	Eastern	Central	Mountain	Pacific
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
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

Country	UTC	Eastern	Central	Mountain	Pacific
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
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	+16.0 H +17.0 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

Country	UTC	Eastern	Central	Mountain	Pacific
Qatar	+3.0 H	+8.0 H	+8.0 H +9.0 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
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	+13.0 H +14.0 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

Country	UTC	Eastern	Central	Mountain	Pacific
Taiwan	+8.0 H	+13.0 H	+14.0 H	+15.0 H	+16.0 H
Tajikistan	+6.0 H	+11.0 H	+11.0 H +12.0 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
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 Is.	+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 C:

CONVERSION CHARTS

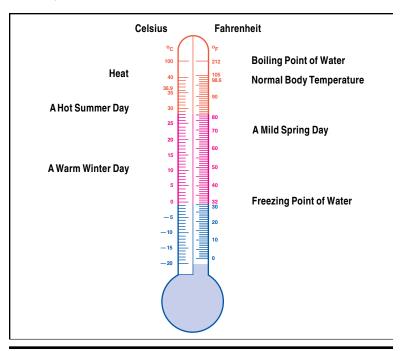
When You Know

Units of Length	Multiply by	To find
Millimeters	0.04	Inches
Centimeters	0.39	Inches
Meters	3.28	Feet
Meters	1.09	Yards
Kilometers	0.62	Miles
Inches	25.40	Millimeters
Inches	2.54	Centimeters
Feet	30.48	Centimeters
Yards	0.91	Meters
Miles	1.61	Kilometers
Units of Area		
Sq. Centimeters	0.16	Sq. Inches
Sq. Meters	1.20	Sq. Yards
Sq. Kilometers	0.39	Sq. Miles
Hectares	2.47	Acres
Sq. Inches	6.45	Sq. Cm
Sq. Feet	0.09	Sq. Meters
Sq. Yards	0.84	Sq. Meters
Sq. Miles	2.60	Sq. Km
Acres	0.40	Hectares
Units of Mass and V	Weight	
Grams	0.035	Ounces
Kilograms	2.21	Pounds
Tons (100kg)	1.10	Short Tons
Ounces	28.35	Grams
Pounds	0.45	Kilograms
Short Tons	2.12	Tons

Units of Volume	Multiply by	To find
Milliliters	0.20	Teaspoons
Milliliters	0.06	Tablespoons
Milliliters	0.03	Fluid Ounces
Liters	4.23	Cups
Liters	2.12	Pints
Liters	1.06	Quarts
Liters	0.26	Gallons
Cubic Meters	35.32	Cubic Feet
Cubic Meters	1.35	Cubic Yards
Teaspoons	4.93	Milliliters
Tablespoons	14.78	Milliliters
Fluid Ounces	29.57	Milliliters
Cups	0.24	Liters
Pints	0.47	Liters
Quarts	0.95	Liters
Gallons	3.79	Liters
Cubic Feet	0.03	Cubic Meters
Cubic Yards	0.76	Cubic Meters
Units of Speed		
Miles per Hour	1.61	Kilometers per
		Hour
Km per Hour	0.62	Miles per Hour

Temperature

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



Temperature Chart

APPENDIX D: HOLIDAYS

National Holidays

1 January New Year's Day

Monday and Tuesday Carnival (unofficial)

before Ash Wednesday

30 March Spiritual Baptist Liberation Day

14 April Good Friday
17 April Easter Monday
20 Mars

30 May15 JuneIndian Arrival DayCorpus Christi

19 June Labor Day

1 August Emancipation Day 31 August Independence Day

24 September Republic Day

Variable, announced Divali

prior to observance

Variable, announced Eid-al-Fitr

prior to observance

25 December Christmas Day 26 December Boxing Day

APPENDIX E:

INTERNATIONAL ROAD SIGNS



Crossroads



Maximum speed



No through road



Road narrows



Fallen/falling rock



No entry for vehicular traffic



Motorway



Stop and give way



Low flying aircraft or sudden aircraft noise



No left turn



One way street



Tourist information point



Traffic signals



No u-turn



Overhead cables, Maximum height



Failure of traffic light signals



Sharp deviation

APPENDIX F: 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 can re-

duce 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 (e.g., 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 before 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
- Cover exposed skin by keeping sleeves rolled down when possible, especially during peak periods of mosquito biting (dusk and dawn); keep undershirts tucked into pants; tuck pant legs into boots

Uniforms correctly treated with permethrin, using either the aerosol spray (reapply after sixth laundering) or 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 (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 rapid 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

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

The work-rest times and fluid replacement volumes in the specific heat category sustain performance and hydration for at least 4 hours. Individual water needs will vary $\pm \frac{1}{4}$ quart per hour.

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

Caution: Hourly fluid intake should not exceed 1½ quarts. Daily fluid 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 and other uncooked vegetables, and raw or undercooked meats should be avoided unless they are from U.S. military-approved sources. Those who must consume unapproved foods should choose low risk foods such as bread and other baked goods, fruits that have thick peels (washed with safe water), and boiled foods such as rice and vegetables.

Human Waste

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

Cold Weather

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

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

WIND SPEED		COOLING POWER OF WIND EXPRESSED AS "EQUIVALENT CHILL TEMPERATURE"																				
KNOTS	МРН	TEMPERATURE (°F)																				
CALM	CALM	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60
		EQUIVALENT CHILL TEMPERATURE																				
3-6	5	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-70
7 - 10	10	30	20	15	10	5	0	-10	-15	-20	-25	-35	-40	-45	-50	-60	-65	-70	-75	-80	-90	-95
11 - 15	15	25	15	10	0	-5	-10	-20	-25	-30	-40	-45	-50	-60	-65	-70	-80	-85	-90	-100	-105	-110
16 - 19	20	20	10	5	0	-10	-15	-25	-30	-35	-45	-50	-60	-65	-75	-80	-85	-95	-100	-110	-115	-120
20 - 23	25	15	10	0	-5	-15	-20	-30	-35	-45	-50	-60	-65	-75	-80	-90	-95	-105	-110	-120	-125	-135
24 - 28	30	10	5	0	-10	-20	-25	-30	-40	-50	-55	-65	-70	-80	-85	-95	-100	-110	-115	-125	-130	-140
29 - 32	35	10	5	-5	-10	-20	-30	-35	-40	-50	-60	-65	-75	-80	-90	-100	-105	-115	-120	-130	-135	-145
33 - 36	40	10	0	-5	-10	-20	-30	-35	-45	-55	-60	-70	-75	-85	-95	-100	-110	-115	-125	-130	-140	-150
Winds Above 40 MPH Have Little Additional Effect		LITTLE Danger				INCREASING DANGER Flesh may freeze within 1 minute					GREAT DANGER Flesh may freeze within 30 seconds											

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

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
- Minimize further exposure to adverse weather

Injuries and Care

Shock

Symptoms

- Confusion
- Cold, clammy skin
- Sweating
- Shallow, labored, and rapid breathing
- Rapid pulse

Treatment

- An open airway should be maintained
- Unconscious victims should be placed on their side
- Victims should be kept calm, warm, and comfortable
- Lower extremities should be elevated
- Medical attention should be sought as soon as possible

Abdominal Wound

Treatment

- Exposed organs should be covered with moist, clean dressing
- Wound should be secured with bandages
- 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
- Pressure points may be used to control bleeding
- Dressings should not be removed; additional dressings may be applied over old dressings

Tourniquet

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

- A 1-inch band should be tied between the injury and the heart, 2 to 4 inches from the injury, to stop severe bleeding; wire or shoe strings should not be used
- Band should be tight enough to stop bleeding and no tighter
- Once the tourniquet is tied, it should not be loosened
- The tourniquet should be left exposed for quick visual reference

■ The time that the tourniquet is tied and the letter "T" should be written on the casualty's forehead

Eye Injury

Treatment

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

Chest Wound

Symptoms

- Sucking noise from chest
- Frothy red blood from wound

Treatment

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

Fractures

Symptoms

- Deformity, bruising
- Tenderness
- Swelling and discoloration

Treatment

- Fractured limb should not be straightened
- Injury should be splinted with minimal movement of injured person
- Joints above and below the injury should be splinted.

- If not in a chemical environment, 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 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 Injury

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 kill

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

Emergency Life-Saving Equipment

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

- Shirts = Dressings/Bandages
- Belts, Ties = Tourniquets, Bandages
- Towels, Sheets = Dressings/Bandages
- Socks, Panty Hose, Flight cap = Dressings/Bandages
- Sticks or Tree Limbs = Splints
- Blankets = Litters, Splints
- Field Jackets = Litters
- BDU Shirts = Litters/Splints
- Ponchos = Litters/Bandages
- Rifle Sling = Bandages
- M-16 Heat Guards = Splints

APPENDIX G: INDIVIDUAL PROTECTIVE MEASURES

Security Threats

Individual protective measures are the conscious actions that people take to guard themselves against physical harm. These measures can involve simple acts such as locking the car and avoiding high-crime areas. 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 one's vulnerability to the security threats overseas (foreign intelligence, security services, and terrorist organizations). If detained or taken hostage, following the measures listed in these checklists may influence or improve one's treatment.

Foreign Intelligence and Security Services

- Avoid illegal, improper, or indiscreet actions or activities.
- Guard conversation and keep sensitive papers in custody.
- Take for granted that you are under surveillance by both technical and physical means, including:
 - Communications monitoring (telephone, e-mail, cell phones, mail, etc.)
 - 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 religious literature for distribution. (You may bring one Bible, or Qu'ran, or other such material for 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, terrorist, or 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, vul-

nerability, 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 hijackings suggest some simple precautions:

- You should not travel in uniform outside the continental U.S. on commercial aircraft.
- Before traveling by commercial aircraft, you should screen your wallet and other personal items, removing any documents that could reveal military affilia-

tion (e.g., credit cards and club membership cards). Note that USMC policy requires service members to wear two I.D. tags with metal necklaces while on official business. In addition, service members must carry a current I.D. card at all times. These requirements are valid even while traveling to or through terrorist areas. In view of these requirements, service members must be prepared to remove and conceal these and any other items that could identify them as military personnel in the event of a hijacking.

- 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 this 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 your profile, the less likely you are of becoming a victim or bargaining chip for the terrorists, and the better your chances of survival.

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 and alertness, and introducing order into each day of captivity can 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; therefore, take measures to protect yourself during such an action. Drop to the floor immediately, remain still and avoid sudden movement; select a safe corner if it offers more security than the floor. Do not attempt to assist the rescuing forces but wait for instructions. After the rescue, do not make any comment to the media until you have been debriefed by appropriate U.S. authorities.

APPENDIX H: DANGEROUS PLANTS AND ANIMALS

Snakes

Bushmaster

Description:

Adult length usually 2.0 to 3.6 meters; longest venomous snake in the Americas. Prominent ridge along the backbone, especially noticeable on the front one-half of the



body. Background color usually reddish-brown, yellowish-tan, or pinkish-tan. Dorsal body pattern usually a series of dark brown to black diamond-shaped blotches; the lateral corners of those blotches usually containing a small patch of paler scales. Head broadly rounded, usually tan, brown, or black on top.

Habitat:

Primarily in forested ares that receive between 2,000 and 4,000 millimeters of rainfall annually; may occur along rivers in drier regions. Often found near large, buttressed trees or fallen logs.

Activity and behavioral patterns:

Active from dusk to dawn, when they are most likely to respond quickly to disturbance (often inflating neck and vibrating tail rapidly).

Venom's effects:

Envenomation results in intense pain, swelling, and necrosis (tissue death, often extensive) around the bite site, sometimes followed by gangrene. Even when antivenin is used bites can be fatal.

Terciopelo

Description:

Adult length usually between 1.2 to 1.8 meters; maximum of 2.5 meters; a moderately slender snake. Background color and patterns vary, but many spec-



imens have what appears to be a series of X markings down the back. Snout is markedly pointed.

Habitat:

Found at elevations from sea level to 1,300 meters in northern areas of its range, and to 2,700 meters in southern areas. Most often found in tropical rainforest and tropical evergreen forest. In drier habitats, stays mainly near rivers and other water sources.

Activity and behavioral patterns:

Terrestrial, but occasionally found in bushes and low trees. Nocturnal; often will seek prey near human habitations and in or near cultivated areas. Unpredictable when disturbed; it is easily provoked to strike. It moves very rapidly, reverses direction abruptly, and defends itself vigorously. Extremely dangerous and often fatal.

Venom's effects:

Carries a large supply of potent venom that primarily is hemotoxic and cytotoxic; bite can result in systemic internal bleeding and local tissue destruction.

Painted Coral Snake

No Photograph Available

Description:

Adult length usually 0.5 to 0.7 meter. Head black, with a posterior yellow or white band that narrows strongly dorsally (may be incom-

plete). Body pattern of broad red rings separated by a series of moderately wide black rings narrowly bordered with white or yellow (rwbwr); some of the white/black/white rings may be incomplete.

Habitat:

Found in tropical deciduous and evergreen forest at low to intermediate elevations.

Activity and behavioral patterns:

No data; believed responsible for many coral snake bites in South America. Coral snakes are usually nonaggressive; most bites occur during attempts to capture the snake.

Venom's effects:

Coral snake venom is primarily neurotoxic.

South American Coral Snake

No Photograph Available

Description:

Adult length usually 0.6 to 0.9 meter; maximum of 1.5 meters. Front of head black, with a narrow white ring in front of the eyes; remainder of head is red. Body pattern consists of moderately broad red rings separated by a series of three black and two white (or yellow) rings (rbwbwbr); the width of the black rings is quite variable, that of the white rings less so.

Habitat:

Most commonly found in savannas, forested areas, rocky regions, and lowland flood plains, including cleared areas and near human habitations. Also found at elevations up to 1,000 meters.

Activity and behavioral patterns:

Will bite if disturbed. Coral snakes are usually not aggressive; most bites occur during attempts to capture the snake.

Venom's effects:

Venom has strong neurotoxic activity with postsynaptic effect. Bites have caused human fatalities in Brazil and Colombia.

Dangerous Invertebrates

Scorpions

Although scorpions in the region 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, including some very large and physically imposing tarantulas, none are 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 having 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. Contact with these caterpillars can be very painful. Some are brightly colored.

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 several weeks. The substance is extremely irritating if it gets into the eyes; 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 harmless to humans. However, when handled, some larger millipedes (may be more than 50 centimeters long) secrete a very noxious fluid that can cause severe blis-



tering upon contact; some can squirt this fluid at least 2 feet.

Dangerous Plants

Black Nightshade

Other names:

Deadly nightshade, common nightshade, horse nettle, bittersweet, Jerusalem cherry, nipple fruit, quena, wild tomato, apple of Sodom, white-edged nightshade.

Mechanisms of toxicity:

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



Comments:

Approximately 2,000 species of herbs, vines, shrubs covered with small star-shaped hairs. Perfect white, yellow, or blue flowers. Berries have dry or juicy pulp and several seeds.

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 American Indians.

Jimsonweed

Other names:

Thorn-apple, stinkweed, Devil's trumpet.

Mechanisms of toxicity:

The entire plant is toxic because of tropane alkaloids. Fragrance from the flowers may cause respiratory irritation, and the sap can cause contact dermatitis. People have been poisoned through consumption of crushed seeds accidentally included in flour; also through attempting to experience the hallucino-



genic "high." Can kill. In particular, jimsonweed has a quickly fatal potential.

Comments:

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

Beach Apple

Other names:

Manchineel, manzanillo

Mechanisms of toxicity:

Fruits have been confused with crabapples, resulting in serious poisoning, even death. Symptoms occur 1 to 2 hours after ingest-

ing the fruit or leaves. Oral irritation with subsequent gastroenteritis, bloody diarrhea. Also causes severe skin inflammation.

Comments:

A coastal tree cultured as a windbreak.



Cashew

Mechanisms of toxicity:

The red or yellow fruit has a shell that contains a brown, oily juice. Will blister skin on contact (oils used to mark up skin for tribal rituals), and on ingestion will cause severe gastroenteritis. Fumes resulting from the roasting process are irritating to eyes and face. Tar from the bark causes blistering and is used in poison arrows in Africa.

Comments:

The toxin is removed in a heating process before the nuts are released. Yellow-to-purple fruit is edible.



Other names:

Taro, calo, dasheen, eddo, black caladium.



Mechanisms of toxicity:

Leaves and roots contain calcium oxalate crystals, or raphides, which boiling renders harmless. Wide variation in concentration from plant to plant. Gastrointestinal irritant;



painful stinging and burning of the lips and mouth recedes slowly; accompanied by difficulty in speaking and swallowing.

Comments:

One of the most commonly cultivated food plants in Polynesia. Young leaves and tubers edible; rich in starch; good substitute for the potato. Used for making poi in Hawaii.

Castor Oil Plant

Other Name:

Castorbean

Mechanisms of toxicity:

Used to make a feed supplement; a lecithin, which is a highly toxic chemical, and some low-molecular weight glycoproteins with



allerenic activity have resulted in serious poisoning. Factors making this a high-risk plant threat are its attractive nuts with a hazel-nut-like taste; the highly toxic ricin present in high concentration (2-6 seeds can be fatal); and stability of ricin in the presence of gastric enzymes. The seeds are used to make necklaces, requiring boring a hole through the seed, and breaking the otherwise impermeable coat, allowing the possibility of toxin to reach the skin

and enter the body through minor abrasions. Poisoning becomes evident after several hours.

Comments:

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

Oleander

Other name:

Rosebay.

Mechanism of toxicity:

All parts are extremely toxic (two cardiac glycosides have been identified). Quickly fatal potential; a single leaf can kill. Toxicity has occurred by cooking fish or meat on oleander branches or from eating honey made from oleander nectar. Symptoms include severe gastroenteritis beginning several hours after ingestion; pete-



chaie occur in various organs. Eventually coma and digitalis-like toxic signs precede death.

Comments:

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

APPENDIX I: INTERNATIONAL TELEPHONE CODES

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