

PN-AYAR-214  
ISN- 36734

# **El Salvador**

## **A Country Profile**



Office of Foreign Disaster Assistance  
Agency for International Development  
Washington, D.C. 20523



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EL SALVADOR: A COUNTRY PROFILE

prepared for

The Office of U.S. Foreign Disaster Assistance  
Agency for International Development  
Department of State  
Washington, D.C. 20523

by

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Evaluation Technologies, Inc.  
Arlington, Virginia  
under contract AID/SOD/PDC-C-3345

The profile of El Salvador is part of a series designed to provide baseline country data in support of the planning and relief operations of the Office of U.S. Foreign Disaster Assistance (OFDA). Content, scope, and sources have evolved over the course of the last several years; the relatively narrow focus is intentional. To avoid redundancy, some topics one might expect to find in a "country profile" are not covered here.

We hope that the information provided will also be useful to others in the disaster assistance and development communities. Every effort is made to obtain current, reliable data; unfortunately it is not possible to issue updates as fast as changes would warrant. A cautionary note, therefore, to the reader: statistics are indicators at best, and if names and numbers matter, the bibliography will point to a current source.

We invite your comments and corrections. Address these and other queries to OFDA, A.I.D., as given above.

October 1984

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1. General Information1.1 Geographic Codes

AID                    519  
State Region        ARA

1.2 Host Mission in U.S.

Embassy of the Republic of El Salvador  
2308 California St., NW  
Washington, DC 20008  
Tel: (202) 265-3480, 3481, and 3482

For current Embassy staff, please consult the  
Department of State, Diplomatic List.

1.3 U.S. Mission in El Salvador

Embassy of the United States  
25 Avenida Norte No. 1230  
San Salvador, El Salvador

APO Miami 34023  
Tel: (503) 26-7100

For current U.S. Mission staff, please  
consult the Department of State, Key  
Officers at Foreign Service Posts.

1.4 Time Zones

EST -1 (-2 during Daylight Savings Time)  
GMT -6

1.5 Currency (October 1984)

Colones 2.50 = US \$1.00 (official rate)  
100 centavos = 1 colon  
Rate currently given by banks in El Salvador  
is 3.95 colones per \$1.00.

1.6 Travel and Visa Information

Passport and Visa: Passport or proof of citizenship is required. A tourist card is issued upon arrival. No visa is required.

Health Requirements: No vaccinations are required.

1.7 Holidays and Calendar

New Year's Day.....January 1  
Holy Week (week before Easter)..variable date  
Labor Day.....May 1  
San Salvador Feasts.....August 3-5  
Independence Day.....September 15  
Columbus Day.....October 12  
Revolution Day.....October 15  
All Souls' Day.....November 2  
First Cry for Independence.....November 5  
Christmas Day.....December 25

Fiscal year: calendar year

1.8 Sister Cities

|                    |                 |
|--------------------|-----------------|
| Nueva San Salvador |                 |
| (Santa Tecla)      | La Mirada, CA   |
| San Miguel         | New Milford, CT |
| San Salvador       | Hollywood, FL   |
| Santa Ana          | Miramar, FL     |
|                    | Santa Ana, CA   |

1.9 Treaties and Agreements

Agricultural Commodities  
Air Transport  
Reciprocal Customs  
Defense  
Economic and Technical Cooperation  
Investment Guaranties  
Peace Corps  
Telecommunications (Radio)

### 1.10 International Organization Memberships

Central American Common Market (CACM), FAO, G-77, IADB, IAEA, IBRD, ICAC, ICAO, ICO, IDA, IDB, IFAD, IFC, ILO, IMF, INTELSAT, ITU, IWC (International Wheat Council), OAS, ODECA (Organization of Central American States), PAHO, SELA, U.N., UNESCO, UPU, WFTU, WHO, WIPO, WMO, WTO.

### 1.11 Geography

#### Location and area:

With an area of 21,393 sq. km, El Salvador is the smallest Central American country and the only one without a Caribbean coast. It is bounded on the north and east by Honduras, and on the west by Guatemala. The Pacific Ocean lies to the south, with the Gulf of Fonseca to the far southeast. Most of the country consists of volcanic highlands of moderate elevation. San Salvador, the capital, is located in these highlands on an intermontane plateau about 600 m high.

#### Climate:

During the rainy season, from May to October, precipitation is heavy throughout the country; the rest of the year there is almost no rain. San Salvador receives an average of 1,600 mm during the rainy season and only 150 mm during the dry season.

The climate is tropical, though temperatures tend to be cooler in the highlands. Temperatures rarely fall below 18°C (65°F) except on the highest slopes of the volcanic ranges. In San Salvador, the average is 23°C (74°F), varying only 3°C between the warmest and coldest months.

See Section 2.1 for a more detailed description of the topography, and Appendix A for a rainfall chart.

### 1.12 Ethnic and Sociocultural Groups

About 93% of the population is mestizo (mixed Spanish-Indian ancestry), 5% is Indian; and 2% white (concentrated around San Salvador). Most of the Indians are descended from the Pipil tribes who inhabited almost two-thirds of the country before the Spanish came. The Pipil are of Mexican origin, while another important Indian group, the Lenca, are descendants of the early Mayas.

The term ladino is used as a cultural designation meaning non-Indian, although there is variation within this classification with respect to race. Almost all the Indians have become fully integrated into the modern culture, and are thus considered ladinos. Only a small number of Indians retain their native way of life.

### 1.13 Languages

Spanish is the official language. It is spoken by almost everyone, including those Indians who speak Pipil (a Nahuatl language) as their native tongue. Pipil is the only indigenous language still spoken, and its use is diminishing as the ladino culture spreads. It is spoken mainly by the elderly and women in a few southwest towns.

### 1.14 Religion

Roman Catholicism is the dominant religion. Separation of church and state is guaranteed by the constitution, and there is complete freedom of worship.

1.15 Government

**National Government:** El Salvador's recent political history has been characterized by extreme instability and civil unrest. In October, 1979, the military regime of General Carlos Humberto Romero was ousted in a coup that brought to power a 5-member junta composed of two army colonels and three civilians. The coalition government implemented a series of reforms including the nationalization of banks, creation of government commodity export monopolies, and redistribution of land. These measures were aimed at breaking the power of the economic elite and were met with opposition from conservative landowners and businessmen. However, the junta also encountered criticism from leftists who protested the government's inability to control right-wing and military violence.

The polarization between left and right and the junta's inability to mediate continued throughout 1980 and 1981 with strikes, kidnappings, and intense fighting. The assassination of Archbishop Oscar Arnulfo Romero on March 24, 1980, served to fuel the conflict and by the end of the year, the country was virtually in a state of civil war. On December 22, 1980, Jose Napoleon Duarte was named president in an attempt to prolong the life of the junta.

The junta began its transition to an elected government with elections for a Constituent Assembly in March 1982. There was a large turnout of voters, but none of the three major parties running (the Christian Democratic Party - PDC, the Republican National Alliance - Arena, and the Party of National Conciliation - PCN) received a majority. Alvaro Magana, an independent, received the most votes and was named interim president by the Assembly. Roberto D'Aubuisson, the leader of Arena, was named Speaker of the Assembly.

After the first round of the presidential elections on March 25, 1984 failed to secure a majority for either of the two major contenders, Jose Napoleon Duarte (PDC) and Roberto d'Aubuisson, a runoff between them took place on May 6, 1984, in which Duarte emerged the victor. He took office on June 1, 1984, vowing to control official corruption, eliminate right-wing death squads, and continue his commitment to human rights. Civil strife continues, although both sides have agreed to set up a joint commission to discuss peace proposals.

**Regional Organization:** The country is divided into 14 departments. Each department has a governor and deputy governor who are appointed by the President and are responsible to the Minister of the Interior. The governor keeps the ministry informed of the local situation and supervises activities of the municipalities.

Local authority in each municipality is vested in a municipal council, which is composed of a mayor (alcalde), a legal representative (sindico), and from two to twelve councilmen (regidores), all elected to four-year terms by popular vote. The number of regidores is determined by the size of the municipality's population. Although the national government supplies most of the communities' basic services, the municipalities provide what supplementary services their resources permit.

### 1.16 Population

|             |  |             |
|-------------|--|-------------|
| Indicators: | Total population (1982)                  | 5.1 million |
|             | Annual growth rate (1970-82)             | 3.3%        |
|             | Projected annual growth rate (1980-2000) | 2.6%        |

|  |       |
|--|-------|
| Urban population (1982)                        | 42.0% |
| Urban growth rate                              | 3.4%  |
| Percent of urban population<br>in San Salvador | 22.0% |
| Age structure                                  |       |
| Under 15 years                                 | 45.0% |
| 15-64 years                                    | 52.0% |

Source: World Bank, World Development Report 1984.

El Salvador is the most densely populated country in continental America. Population density has reached 225 people per sq. km (580/sq. mi), three times that of any other mainland country in the hemisphere. This growth has put tremendous pressure on the labor market and resulted in large-scale migration into neighboring Honduras, where land is relatively abundant. Urbanization has also accelerated rapidly, increasing from 25% of the total in 1950 to a current 42%. In metropolitan San Salvador, more than half the population lives in overcrowded inner city tenements or illegal peripheral subdivisions.

With almost half of the country's population under 15 years, growth of the labor force will be rapid, resulting in even greater unemployment and migration.

The least densely populated areas are the northernmost parts of the country comprising the departments of Chalatenango, Morazan, and Cabanas. Urban centers in this area are small and the population is predominately rural. These regions (along with the San Salvador metropolitan area), however, are also the departments most severely affected by the influx of displaced persons. Although estimates vary widely, it is thought that at least 8% of the country's population has been displaced because of internal violence.

See Section 2.8 and 2.9 for information on civil strife and the displaced population, and Appendix B and C for population charts.

1.17 Health

|                            |                                    |    |
|----------------------------|------------------------------------|----|
| Indicators:<br>(1982)      | Birth rate/1,000 population        | 40 |
|                            | (down 17.5% from 1960-82)          |    |
|                            | Death rate/1,000 live births       | 8  |
|                            | (down 52.1% from 1960-82)          |    |
|                            | Infant mortality/1,000 live births | 72 |
| Child (aged 1-4) mortality | 7                                  |    |
| Life expectancy, years     | 64.5                               |    |

Source: World Bank, World Development Report 1984.

**Health Overview:**

The health status of the majority of the Salvadoran population is precarious, although the health care system is relatively extensive. El Salvador is ranked among the countries in the Western Hemisphere most seriously affected by malnutrition. The prevalence of serious malnutrition is greatest in the 1 to 5 age group with a higher incidence found in rural areas than in urban areas. Among children under the age of five, mortality from nutritional deficiencies represents 37% of total deaths in San Salvador and 47% of total deaths in rural areas. According to a July 1984 report from the Ministry of Planning, 53% of children under five were malnourished, and the high incidences of infant deaths were, in many cases, from preventable diseases. (A USAID Health Sector Assessment completed in 1979 and based on the Gomez classification standards, reported a malnutrition rate of 70% among children. Of this group, 20% also suffered from third degree protein-calorie malnutrition.)

The high birth rate also has a serious impact on the health of women and infants. On the average, women have over six children. For the sixth and subsequent births, the infant mortality rate more than doubles from 72 to 160 per 1,000 live births.

The leading causes of morbidity are enteric diseases, respiratory diseases, and malaria. Because the major causes of death (not including casualties due to civil war and the high infant death rate) and illness are gastro-intestinal diseases (infectious

diarrhea, intestinal parasites and dysenteries), the key to improved health is better environmental sanitation. The incidence of virtually all of these diseases could be drastically reduced if measures were introduced to provide adequate and safe water supplies, control waste disposal, and improve food sanitation and caloric intake in both rural and urban areas.

Ten Major Causes of Death, 1980 and 1981

| <u>Causes</u>                    | <u>Numbers</u> | <u>% of Total Deaths</u> |
|----------------------------------|----------------|--------------------------|
| Homicide and injuries            | 7,973          | 10.7                     |
| Perinatal problems               | 6,842          | 9.1                      |
| Intestinal infection             | 4,514          | 6.0                      |
| Other accidents                  | 2,751          | 3.7                      |
| Bronchitis, emphysema,<br>asthma | 1,987          | 2.7                      |
| Malignancies                     | 1,906          | 2.5                      |
| Auto accidents                   | 1,850          | 2.5                      |
| Ischemic heart<br>disease        | 1,670          | 2.2                      |
| Cerebrovascular                  | 1,621          | 2.2                      |
| Other heart disease              | 1,411          | 1.9                      |
| Total                            | 32,525         | 43.5%                    |
| All Deaths                       | 74,761         | 100.0%                   |

Source: Displaced Persons in El Salvador, An Assessment, AID, March 1984.

Although the government has placed a high priority on improving the health of the population, the country's health status as a whole has deteriorated since 1978. Violence, an unfavorable economic situation, a decrease in the Ministry of Health's budget, and a growing displaced persons population are the primary contributing factors to this decline.

**Diet:**

Basic staples for the rural population include corn, sorghum, rice, and black or red beans. These account for approximately 60% of caloric intake, which is supplemented by bread, fruit, fish, and vegetables. Meals tend to be vegetarian and high in starch con-

tent, with meat, poultry, and dairy products only a minor part of the diet. Eating habits in the cities follow the same general pattern except for members of the upper economic strata who can afford European food.

### 1.18 Economy

Before 1960, El Salvador was primarily a coffee-exporting country. Since then, it has reduced its dependence on coffee by diversifying agriculture and developing an industrial sector. Although the country is still predominantly agricultural, El Salvador is also the most highly industrialized nation in Central America. The creation of the Central American Common Market (CACM) in 1963 stimulated the development of the manufacturing sector, helping El Salvador achieve average real growth during the 1960s and 1970s of more than five percent a year. At the same time, however, the population increased from 2.6 million in 1960 to 4.8 million in 1980. Industry was therefore unable to provide jobs for most new members of the labor force, and the country's limited size and concentration of land ownership stifled opportunities for the growing rural population to become independent landholders.

The deepening socio-political turmoil in recent years has resulted in a deceleration of the economic growth rate. The military leadership installed by the October 1979 coup supported a number of sweeping economic changes, including agrarian reform and nationalization of the financial system and coffee and sugar-marketing operations. However, the economy has continued to suffer and the violence has not abated.

From 1979 to 1982 GDP has fallen by about 25% in real terms. Exports dropped by 40%, and unemployment reached about 40%. The violence triggered large-scale capital flight, reduced public investment by 48% and private investment by 74%. Direct damage to the economy from guerrilla sabotage has been estimated at more than \$800 million since 1979.

Guerrilla strategy includes attacks on basic infrastructure, especially transportation and electrical power centers, as well as attacks on the agricultural sector. In 1983 the economy levelled off, with indication for slightly positive growth in 1984.

Urban unemployment remains high and has increased due to the influx of displaced persons from the regions affected by the fighting. Recovery is hampered by the financial burden of fighting the ongoing civil war. Depressed commodity prices, declining CACM demand for manufactured goods, high interest rates, and the sharp increase in oil prices in 1979-80 have also been costly to the economy.

GDP by Sector, 1982

|                                |      |
|--------------------------------|------|
| Agriculture, forestry, fishing | 25%  |
| Industry                       | 16   |
| Services                       | 59   |
| Total (\$3,662 million)        | 100% |

GDP per capita (1982) \$720

External public debt (1983): \$955 million

Balance of Payments:

The balance of payments was -\$152 million in 1982. Imports amounted to \$826 million and exports to \$704 million. Despite the fall in exports (37.4% since 1979) the balance of payments is considered tolerable because of an equally sharp reduction in imports, mainly in the manufacturing and commerce sectors, and the high level of external financial support.

**Imports:** Major agricultural imports are wheat, corn, and vegetable oils; other major imports are machinery, petroleum, and raw materials.

Main sources of supply are the U.S. (25.4%), Guatemala (25.1%), Venezuela (8.0%), Costa Rica (4.7%), and Japan (3.4%).

**Exports:** Major exports are coffee, cotton, sugar, shrimp, and transportation equipment.

Main export markets are W. Germany (33.0%), the U.S. (25.5%), Guatemala (17.7%), Japan (4.8%), and Costa Rica (4.3%).

Source: E.I.U. Quarterly Economic Review, 1984.

### 1.19 Agriculture

Rural land tenure in El Salvador began to change from communal ownership and subsistence farming to large private holdings around the end of the 19th century, when the highly profitable cultivation of coffee was introduced. This was followed by increased production of sugar and cotton, and consolidation of land holdings into fewer and larger private farm units. One result of this consolidation was the development of a large class of landless peasants and migrant workers until, by 1971, about 40% of the land was concentrated in the hands of about one percent of the owners. Seventy percent of all farmers were sharecroppers, laborers, or owned fewer than five hectares (12.5 acres) of land.

The civilian-military government that came to power in 1979 pledged itself to address the problems of land tenancy and passed a set of sweeping reforms. In March 1980 the largest farms were transformed into agricultural cooperatives and a system of compensation was established for the previous owners. One month later procedures were established to enable sharecroppers and tenant farmers to become the owners of the land they had

worked. These basic reforms were incorporated into El Salvador's new constitution in late 1983, when the Constituent Assembly also established a ceiling on the maximum amount of land that a single owner could hold, giving owners three years to sell land above this limit.

El Salvador has made significant progress towards its goal of more equitable distribution of land ownership and agricultural wealth. Over 93,000 Salvadorans have received land either individually or as members of cooperatives. Including families, more than 560,000 people have benefitted from the agrarian reform, and about 23 percent of El Salvador's total farmland has been transferred to those who previously worked the land but did not own it. More than 12 percent of El Salvador's total population and approximately 25 percent of the rural poor have benefitted.

In light of the land reform's massive reorganization of productive resources, ownership patterns, and established marketing relationships, reduced output was inevitable. It is difficult, however, to segregate the impact of the reform from the impacts of other factors, such as bad weather, depressed international prices, and civil strife. Although total area planted has decreased steadily since the reform's inception (8.1 percent) and average yields for the nation are mixed (but generally down from 1980), the reformed sector's average yields equal or exceed those of the nation as a whole.

About 70% of the total land area (2,139,300 hectares) is arable; 35%-40% is cultivated. Fourteen percent of the cultivated area is under irrigation. The agricultural labor force rose from 617,000 in 1970 to 811,000 in 1980, although in proportion to the total labor force these numbers represent a decrease of 5%. The agricultural sector grew at an annual average rate of 1.7% between 1976 and 1978. However, from 1979, to 1983 it steadily declined, and net output fell by 7.4% in 1982.

Agricultural Production  
( '000 tons)

|           | <u>1979</u> | <u>1980</u> | <u>1981</u> | <u>1982</u> | <u>83-84</u> |
|-----------|-------------|-------------|-------------|-------------|--------------|
| Coffee    | 179         | 165         | 150         | 143         | 160          |
| Cotton    | 72          | 65          | 41          | 42          | 37           |
| Maize     | 523         | 527         | 487         | 479         | 483          |
| Sugar     | 277         | 179         | 174         | 185         | 300          |
| Dry beans | 47          | 40          | 38          | 37          | 46           |
| Rice      | 58          | 61          | 52          | --          | 41           |
| Sorghum   | 160         | 140         | 138         | 137         | 145          |

Source: EIU Quarterly Economic Review, 1984 and Quarterly Economic Report from El Salvador, January 1984.

Agricultural exports and agriculture for the home market both declined sharply in the period from 1980 to 1982, as volume and prices fell. Coffee, which contributes about 50% of the country's export earnings, has suffered a 22% fall in production since 1979, due to the combined effects of low world prices, high interest rates, credit restrictions for the coffee growers, and bureaucratic delays created by the nationalization of foreign trade. Production of basic grains for local consumption has also fallen steadily, as the area planted has been reduced. The decrease in production of food for the domestic market has resulted in increased food imports. From 1981-1983, food imports rose by 42%, reaching 13% of total imports.

The fishing industry has been expanding and there is a growing domestic demand for fish products. In 1980, fish production amounted to 14,000 tons; exports of shrimp and other fish earned \$24.0 million in 1982.

See Section 2.5 for planting and harvesting dates and crop vulnerability.

1.20 Communications

- Television:** Five stations provide programming to the approximately 300,000 receivers (75,000 color). The government stations are the educational channels, 8 and 10, headquartered at Ap. Postal 4, Nueva San Salvador. There are three commercial stations.
- Radio:** All stations are commercial: 76 medium wave, two short wave, and nine FM, serving 1.49 million receivers. All stations are part of the Asociacion Salvadorena de Empresarios de Radiodifusion, Ap. Postal 210, San Salvador.
- The regulatory agency for telephone, radio, and television is the Administracion Nacional de Telecomunicaciones (ANTEL).
- Telephone:** ANTEL maintains over 65,000 lines with automatic control switching and provides services to 261 municipalities. As of January 1982, there were 86,316 telephones in the country, 54,000 of which were in the capital. Overseas calls to the U.S. can be made easily and quickly except during peak weekend hours.

1.21 Transportation

- Ports:** The Port Authority, CEPA, operates and administers El Salvador's two ports, Acajutla and Cutuco. It also manages the national railroad system, FENADESAL, and the El Salvador International Airport.

Cutuco handles principally coffee and cotton, and is accessible only by rail. Acajutla is the main port and also serves Guatemala. It is located about 85 km southwest of San Salvador.

See also Section 3.7, Ports.

- Railroads:** Two private railroad firms merged in 1975 to form the government-run FENADESAL. The rail network comprises 602 km of main track, connecting the capital with both ports and with all principal cities. It also connects with the railroads of Guatemala, reaching Guatemala City as well as Puerto Barrios on the Atlantic coast. All track is 0.914 meter gauge, single-track (narrow gauge and light weight). In 1981, FENADESAL operated 19 locomotives and 660 units of rolling stock.
- Road Network:** El Salvador has a good road system that is well integrated with railway service. It has, however, suffered deterioration through lack of maintenance and subversive action that has destroyed a number of bridges. The Pan-American Highway bisects the country, running east-west for 625 km. It is the most heavily traveled road, as it connects the major cities of Santa Ana, San Salvador, and San Miguel. The second major road is the Littoral Highway, which parallels the coast. Seven paved, all-weather roads connect these two main highways; another runs north from San Salvador to the Honduran town of Nueva Ocotepeque, but is not currently heavily traveled as it runs through guerrilla-controlled territory. In 1983 there were 10,839 km of classified roads, of which about half were all-weather. Registered passenger cars totaled 78,000 and commercial vehicles 58,200 in 1979.
- Airports:** The El Salvador International Airport began operating in January 1980, replacing the older international airport at Ilopango. Ilopango is now a military airbase. The new airport is located at Comalapa, about 15 km or 30 minutes by road southeast of San Salvador, with access to the city through an excellent four-lane highway. It is ten minutes from the beach area and has connecting roads to the Pan American Highway and the Littoral Highway.
- There are no other major or secondary airports. There are, however, numerous small grass landing strips located throughout the country, especially in the eastern cotton-growing areas where aerial crop dusting is common.

See also Section 3.8, Airports.

**Airlines:**

AESA Aerolíneas de El Salvador provides cargo and mail service between San Salvador and Miami.

TACA International Airlines provides passenger and cargo services to Belize, Costa Rica, Guatemala, Mexico, Honduras, and the U.S.

With the demise of Air Florida, Capital Airlines is the only U.S. airline flying to El Salvador.

## 2. Disaster Vulnerability

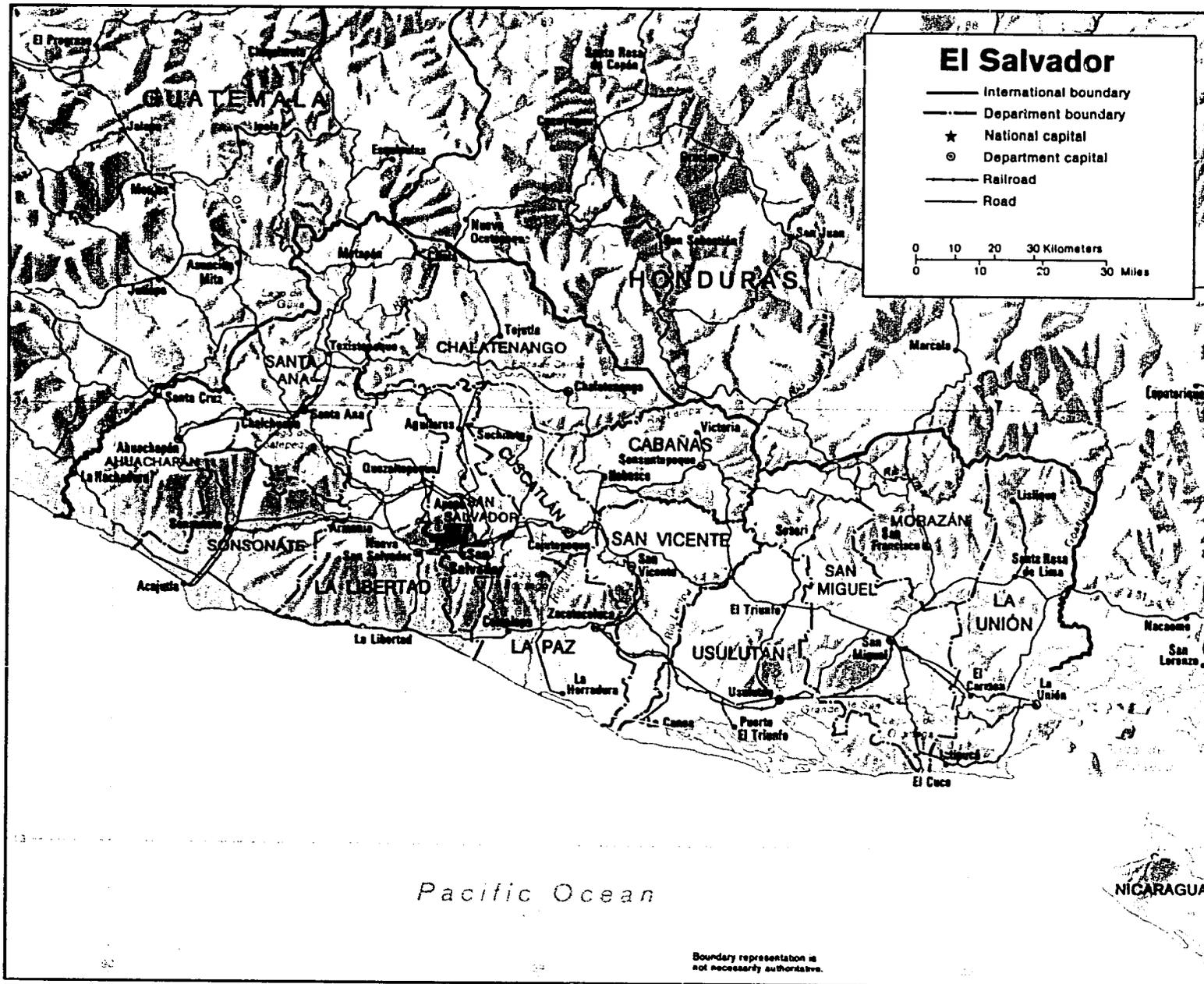
### 2.1 Overview of the Physical Environment

Two parallel chains of volcanoes extend east-west through El Salvador. The southern or Coastal Range contains the highest peak (Volcan Santa Ana, 2,340 m) while the northern or Sierra Madre Range is lower and less continuous. The mountains divide the country into three physical zones based primarily on elevation. The southern coastal plain, or tierra caliente (torrid land) is a narrow flat belt bordered by the Coastal Range. The central highlands, or tierra templada (temperate land), lies between the two ranges. This plateau, about 600 m high, comprises most of the country. It decreases in elevation toward the east and is dotted with volcanic cones and deeply cut by streams. Small basins are found scattered in this region, some filled with water, others with volcanic ash. This area is subject to frequent volcanic eruptions and earthquakes. The third zone is the northern lowlands, located north of the Sierra Madre and formed by the Rio Lempa Valley.

The coastal lowlands are characterized by large areas of swampland, humid forests, and semi-humid savannas. In the Central Plateau and the Lempa River Valley evergreen forests and chaparral are common, though much of the land has been cleared for farming and livestock grazing. The highlands of the Coastal Range and the Sierra Madre are characterized by varied vegetation according to altitude. Semi-humid forest covers most of the land below 800 m. Between 800 m and 1,800 m oak and pine forests can be found, though most of this land is used for coffee growing and pasturage.

The 257-km Rio Lempa is El Salvador's main river and the largest in Central America. It rises in the rugged hill country of Guatemala, crosses a corner of Honduras, and cuts across the northern mountains of El Salvador before turning eastward for about 129 km. It then turns sharply south and flows 105 km across the volcanic highlands to the Pacific. In the rainy season the river floods in many places, but during the dry season many sections are almost dry. The river is navigable for only short, disconnected stretches, the longest up to 40 km for shallow-draft vessels. The Rio Lempa connects with an irregular network of about 150 streams and minor waterways, all of which eventually empty into the Pacific.

Two other river systems drain small portions of the west and east. The Rio Paz on the Guatemalan border drains the western end of the coastal plain, and the Rio San Miguel does the same in the east. There are several large lakes and lagoons, the principal ones being Lake Ilopango near San Salvador and Lake Guija on the Guatemalan border. Many other small lakes, lagoons, and sulfur springs are scattered over the countryside.



## 2.2 Tropical Storms and Floods

Tropical depressions are frequent during September. They follow a path parallel to the Pacific coast, sometimes increasing in force to become tropical storms or hurricanes when they reach median latitudes. They produce heavy rains, known as temporales, which may last up to five days.

In 1982, a depression moved inland, causing extensive damage to San Salvador and the departments of Ahuachapan and Sonsonate, as well as several departments in Guatemala. Rainfall in the San Salvador area reached nearly 400 mm in 18 hours and 500 mm in the western part of the country, more than 20% of average annual rainfall. Winds of up to 90 km per hour uprooted trees in the higher areas and produced waves four to five meters high along the western shoreline. Rapid saturation of soil (already loosened by a recent earthquake and further damaged by an intense dry spell) and strong winds caused heavy runoff, which eroded large areas and swept away rocks and trees. Approximately 14,000 sq. km of land were severely flooded, resulting in extensive damage to property and crops.

In the highlands, heavy flooding and mud flows in rivers and streams washed away valuable soil in coffee cultivation areas. Toward the flatter coastal plain, rivers overflowed their banks and inundated the adjacent cropland. The Paz River, on the border between El Salvador and Guatemala, altered its course, destroying a connecting bridge in Hachadura.

In San Salvador, the upland areas around the city received the full impact of the winds and intense rains. The volcanoes and steep mountains above the city have been cleared of forest land, and the soil is unstable. Mud flows formed rapidly and swept into the city below, burying hundreds of homes. Colonia Montebello, a new urban district northwest of the city, suffered the most devastating of many landslides, when the skirts of the San Salvador Volcano collapsed under the downpour and deposited more than 225 cubic meters of mud and soil on the area. The potential for similar mud flows threatens many districts around San Salvador.

El Salvador is out of the path of both the Gulf of Mexico and the Pacific hurricanes. It does however, occasionally suffer from the fringe effect of tropical storms from the north that damage crops and houses. The only recent major hurricane was Hurricane Francelia in 1969, which affected 4,600 people and caused an estimated \$1.6 million in damage.

## 2.3 Seismicity

El Salvador is situated along a fault line where two plates of the earth's crust meet. The western, or East Pacific, plate is shifting slowly southeast and is being overridden by the Southern Caribbean plate.

As long as the plates can shift sideways relative to one another there is no problem, but when the movement is hindered for a few years or decades, an earthquake occurs.

The country has a long history of destructive earthquakes. San Salvador has been destroyed or badly damaged more than a dozen times since 1524 when recordkeeping began. Earthquakes have been recorded in 1575, 1594, 1671, 1719, 1798, 1806, 1815, 1839, 1854, 1873, 1917, 1951, 1965, and most recently on June 19, 1982. Preliminary results of studies show that the greatest earthquake risk comes from shallow faults along the chain of active volcanoes rather than the deeper more distant interplate zone near the Pacific Coast.

The 1982 earthquake registered 7.0 on the Richter scale. It shook the central-western part of the country, causing damage or destruction to many rural and urban homes and buildings, killing 20 and leaving about 2,500 homeless. Water, electric power, and telephone services were disrupted, and landslides blocked main highways and railroad lines.

#### 2.4 Volcanoes

El Salvador has 180 volcanoes; however, only eight have shown significant activity in historic times.

Santa Ana: Violent eruptions in 1576, 1847, and 1880; mild eruptions in 1904 and 1937; active fumaroles (gas and smoke vents) until 1955.

Izalco: Formed since 1770 by very frequent eruptions, last major eruption in 1926; known as "Lighthouse of the Pacific" for the visibility of its flares from offshore.

San Marcelino: Eruptions in the 17th century and in 1722.

San Salvador: Crater lake drained in 1917 by seismic disturbance and eruption, with formation of small cinder cone and lava flow.

San Vicente: Active fumaroles.

Tecapa: Active fumaroles.

Chinameca: Active fumaroles.

San Miguel: Frequent eruptions since 1586; major eruption in 1787 formed lava flow now called La Malpaicera; last major eruption in 1844.

The principal zone of earthquakes in Central America coincides with the zone of recent volcanic activity. Both volcanic and seismic activity in El Salvador are caused by movements along the same fault line. (See map on the following page).

### 2.5 Drought

During the months of July and August, in the middle of the rainy season, a dry spell (called the canicula) occurs that usually lasts between ten and twenty days. During this time there is not enough rainfall to satisfy crop water requirements, and plant survival depends on water stored underground. If the canicula is unusually long or severe, as it was in 1972, 1976, and in 1982 in the eastern part of the country, crop damage can be heavy. In 1982, soil water storage was not sufficient to meet crop demands, especially corn, rice, and cotton. Some crops were either lost entirely or their yield drastically diminished.

### 2.6 Agricultural Vulnerability

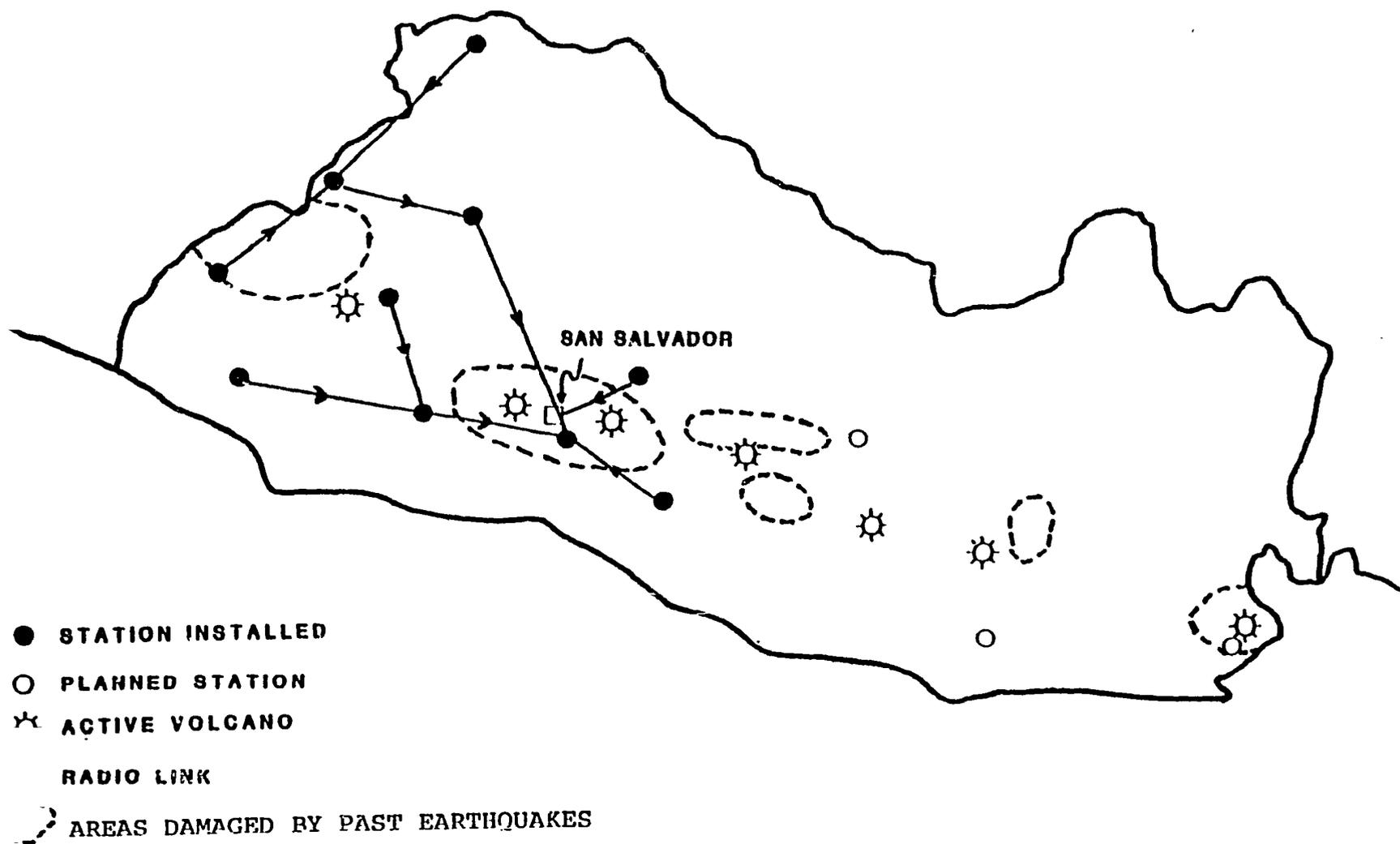
The agricultural system is dualistic. Commercial farming of the major export crops (coffee, cotton, and sugar) is practiced on the best lands by the upper classes. The farms are concentrated in large continuous tracts on the Coastal Range and the Coastal Lowlands. Subsistence cultivation on small hillside plots by the bulk of the rural population produces most of the food crops. (See p. 23 for a chart of planting and harvesting dates.) These plots are usually found on the less desirable steeper slopes.

Cultivation practices vary widely from one crop to another. Because coffee is grown on mountain slopes under shade trees, the use of machinery is difficult and growers depend instead on semi-skilled labor. In contrast, machinery is essential in cotton farming, and fertilizers and insect and disease control measures are also used. The heavy use of pesticides in cotton production has resulted in damaged soil and serious health problems. El Salvador has the highest rate of pesticide poisoning in Central America.

Land in El Salvador is in short supply, and most of the better acreage is intensively cultivated. Yields of coffee and cotton are among the highest in the world, due in part to the fertile volcanic soil. Overall, about 40% of the country's land area is cropland, 25% of which is devoted to coffee.

The vast majority of farms are extremely small. In 1970, 91% were under 22 hectares (utilizing 22% of total farmland) while only 0.1% were over 500 hectares (utilizing 24% of farmland). The highest proportion of land under cultivation is along the Pacific coast.

# SEISMOGRAPH NETWORK AND VOLCANIC ACTIVITY



Source: Progress Report of Earthquake Hazards Reduction Program (Harlow, 1984)

In 1980, implementation of the Agrarian Reform Law substantially affected the structure of the agrarian sector. At that time, the Salvadoran Agrarian Transformation Institute (ISTA) expropriated 270 farms of more than 500 hectares each, covering a total area of 216,000 hectares. These farms were devoted to export crops and stockraising, and accounted for about 15% of arable land, including some of the country's most fertile acreage.

Another important reform was the establishment of government monopolies for sugar and coffee. The National Sugar Institute also assumed responsibility for the management of some large sugar mills. These institutional changes, along with financing, labor, weather, and input supply problems, adversely affected the development of agricultural activities: GDP declined, and sugarcane and coffee production fell. The output of basic grains was more favorable than that of export crops, as small holdings were not subject to the agrarian reform.

The following information is from the Climate Impact Assessment Methods for Drought/Food Shortage Early Warning in Central America: Final Report, produced by NOAA and the University of Missouri, 1983.

Adverse Impact on Crop Conditions and Food Security

| <u>DATE</u> | <u>EVENT</u>   |
|-------------|--|
| 1957        | Drought affected crops.  |
| 1963-64     | Limited land resources, urban population movement, and shifts to export crop production continued.                     |
| 1964-65     | Disease affected rice and bean crops.  |
| 1967        | A slow start of the summer rainy season adversely affected crop production in some Pacific coastal areas.              |
| 1968        | Hot, dry weather adversely affected food crops in the eastern area of the country.                                     |
| 1972        | June and July were very dry and there were great losses to agriculture.  |
| 1974        | Drought during July and August in the south and flooding in June at Pasaquina reduced corn, bean, and rice production. |
| 1975        | Drought cut sugarcane yields and floods affected cereals when Hurricane Fifi struck in January.                        |
| 1976        | A one-month drought occurring in the middle of the rainy season lowered yields of grain and other basic food crops.    |



### 2.7 Civil Strife

The inequitable distribution of income in El Salvador, historically skewed in favor of a small minority, is the underlying factor in the civil strife that has torn the country since 1979. In the year prior to the October 1979 coup, which replaced a right-wing military regime with a reformist civilian-military junta, open opposition to the government by leftist insurgents had increased. A program of socio-economic reforms failed, however, to appease the extreme left whose tactics since the beginning of 1981 have concentrated on terrorism and guerrilla warfare. As the confrontation between government forces and the rebels intensified, an extreme right wing paramilitary faction, intent on restoring the old order, engaged increasingly in retaliatory terrorism. The escalating violence in the countryside resulted in the deaths of thousands of civilians and the dislocation of hundreds of thousands of others. The violence continued undiminished following Constituent Assembly elections in March 1982 and the establishment of a provisional government of national unity.

The new constitution, approved in December 1983, paved the way for the transition to an elected government. The conflict has continued, however, causing considerable damage to infrastructure (especially power installations, roads, and bridges) as a result of terrorist activity and combat. The violence has also contributed to high unemployment and declining GNP due to capital flight and the disruption of industrial and agricultural production. Only recently, in 1983, has the decline in economic activity ceased and capital flight been reduced.

### 2.8 Displaced Persons

The displaced persons phenomenon first appeared in January 1980 as rural people caught in conflict zones began to leave their homes and possessions to seek protection in urban areas. The departments near the Honduran border, where leftist guerrillas had their strongest positions, were the most seriously affected initially. The area of conflict spread from the departments of Morazan, Cabanas, and Chalatenango to include San Miguel, San Salvador, San Vicente, Usulután, and Cuscatlán. Eventually, some civilians were displaced in all fourteen departments of the country.

There are no precise figures on the number of people affected. The number of displaced has changed constantly as new areas have become combat zones and others have been "pacified". Also, many displaced persons did not register with the government for assistance until the economy had deteriorated to a point where they could no longer be supported by their extended families. The trend, however, is generally upward. USAID estimates show that the number grew from 46,000 in September 1980, to 200,000 in November 1981, 248,000 in September 1982, and 500,000 by April 1984. By that date, there were 390,000 displaced persons registered with the government and receiving assistance. Another 150,000 to 200,000 nonregistered displaced persons were being cared for

by voluntary agencies. In addition to those who have been internally displaced or stranded in troubled areas, thousands of people have fled the country to escape the fighting or the threat of political persecution.

Approximately 75 to 80 percent of the displaced persons within the country are dispersed throughout the population, occupying houses or rooms provided by family or friends or squatting in abandoned buildings. The others reside in communal shelters (initially schools, churches, and makeshift camps and later, camp-like settlements). A small minority live in unsheltered conditions. Most people are eager to return to their homes when it is considered safe to do so. Not infrequently, however, they are forced to flee again. A few are able to work their land by day and return to the shelters at night.

The lack of employment opportunities for the displaced, and the consequent reduction of their purchasing power, has emerged as a major problem. Another serious concern has been the marked increase in health problems. Poor living conditions in some of the accommodations -- overcrowding, and a lack of potable water, sanitation, and adequate clothing -- have been blamed for the dramatic rise in illness among the displaced persons. According to epidemiological reports of the Ministry of Health, the incidence of some communicable diseases had increased over 400% as of December 1981. A 1982 study conducted by the government relief agency found that the mortality rate among the displaced population was 22.4 per 1,000 in 1981. This rate was 3.4 times the national average of 6.5 per 1,000.

The displaced persons situation is constantly changing. Toward the end of April 1984, there were reports of significant increases and movements of displaced persons and returning refugees in the departments of Morazan, San Miguel, and La Union. Approximately 1,400 Salvadoran refugees had returned from Honduras, citing the relocation of the Honduran refugee camps away from the border as the reason for their return. Additionally, an estimated 5,000 people had fled their villages in northern Morazan and San Miguel, reportedly to escape conscription or pressure to support the guerrillas.

A comprehensive study of the displaced was conducted by an AID/Department of State team in January 1984. The results were published in "Displaced Persons in El Salvador, An Assessment," March 1984. The report assessed health, nutrition, food assistance programs, the AID Jobs Program, camp conditions, the status of dispersed displaced persons, and other issues. The conclusions of the assessment team are summarized in the report's Executive Summary (See Appendix D). See Section 3.11 for information on emergency programs for the displaced.

2.9 Disaster History

| <u>Disaster</u>                    | <u>Location</u>      | <u>Date</u> | <u>No.<br/>Killed</u> | <u>No.<br/>Affected<br/>( '000)</u> |
|------------------------------------|----------------------|-------------|-----------------------|-------------------------------------|
| Earthquake                         | Jacuapa              | 5/06/51     | 1,000                 | n.a.                                |
| Earthquake                         | San Salvador region  | 5/03/65     | 125                   | 90,582                              |
| Equine Encephalitis                | SW to NW             | 6/00/69     | 12                    | 19                                  |
| Border Conflict                    | Honduran border      | 7/14/69     | n.a.                  | 22,000                              |
| Hurricane                          | Rio Lempa & SW Coast | 9/04/69     | 2                     | 4,600                               |
| Civil Strife                       | Widespread           | 3/20/80     | n.a.                  | n.a.                                |
| Civil Strife                       | Widespread           | 10/24/80    | 10,000                | 80,000                              |
| Power Shortage                     | Eastern region       | 8/31/81     | n.a.                  | 990,000                             |
| Civil Strife/<br>Displaced Persons | Widespread           | 3/11/82     | 20,000                | 248,000                             |
| Earthquake<br>Flood/               | Five departments     | 7/01/82     | 20                    | 30,000                              |
| Torrential Rain<br>Civil Strife/   | Sonsonate/Ahuachapan | 9/17/82     | 500                   | 50,000                              |
| Displaced Persons                  | San Miguel/Morazan   | 5/30/84     | n.a.                  | 6,400                               |

Source: OFDA Disaster History on file in Washington, D.C. Covers 1900 to the present.

3. Disaster Preparedness and Assistance3.1 Host Country Disaster Organizations

National Emergency Law: Under the Civil Defense Law of 1976, the National Civil Defense Committee was designated responsible for the organization and implementation of relief efforts during disasters or national emergencies. However, because of the political nature of the country's continuing crisis, many government leaders believed that emergency relief should not be solely the responsibility of local Civil Defense committees, groups that are considered paramilitary and closely connected to the armed forces. In mid-1984, therefore, the National Legislative Assembly met to consider a new National Emergency Law which would not be associated with partisan military groups, and would create and define a new National Emergency System.

The new law establishes municipal, departmental, regional, and national emergency committees. The National Emergency Committee is to be headed by the Ministry of the Interior and include the Ministries of Defense, Agriculture and Livestock, Public Health and Welfare, Public Works, and Planning. If approved by the Assembly, the new law will supercede the Civil Defense Law and place responsibility for disaster relief in the hands of local and national committees, supported by government and voluntary agencies, such as the Salvadoran Red Cross (SRC) and the Green Cross. Funding for implementation would come from both government and private sources and the international community.

In August 1984, when the new law was being considered by the Assembly, there was no Emergency Operations Center nor official budget. Current needs were being met by the individual ministries involved in relief efforts.

Government agencies assisting the displaced: In October 1980, the Salvadoran Government (GOES) created a multisectoral commission to assist the displaced persons. Various ministries such as Health and Interior and the SRC were represented on the commission. The distribution of relief supplies was carried out through several agencies: DIDECO, the GOES community development agency, had primary responsibility for food and other direct assistance in the less conflictive zones; the International Committee of the Red Cross (ICRC), the SRC, and the Green Cross operated in the more dangerous areas; and the Accion Civica Militar brought assistance to the most critical zones. The Direccion de Desarrollo Regional (DDR) provided agricultural inputs to those displaced persons who were able to return to their farms.

Following a reorganization in October 1981, the Consejo Nacional Autonomo para Asistencia a los Desplazados (CONADES), an autonomous government commission, took over the task of coordinating, planning, and delivering assistance to the displaced population. This included food distribution formerly carried out by DIDECO as well as local procurement of food supplies to augment rations provided by donor feeding programs. By July 1983, CONADES was delivering food assistance to 149,000 people and serving the largest number of settlements.

CONADES has expanded warehouse facilities, established a minimum food ration and a standardized shelter unit, and worked with voluntary agencies to improve coordination of relief efforts. Working with the Ministry of Health, CONADES has recruited medical personnel and established requirements of drugs and other supplies for the health component of the USG/GOES Emergency Health and Jobs Project (See also 3.11, USAID Emergency Program). The organization maintains a local promoter, or supervisor, in each province. These employees have organized municipal committees of community leaders called CLADs, which are responsible for registering the displaced persons in their municipality and distributing food and initiating work projects in the displaced settlements. The displaced persons, after registering, are organized into local communities known as CLDs.

Another government agency, headed by the Ministry of Defense, is the Comision Nacional de Restauracion de Areas (CONARA), created to resettle displaced persons in areas that have been recaptured and pacified by government forces. CONARA's activities have been concentrated in the departments of San Vicente and Usulután.

The Salvadoran Red Cross, Green Cross, and Green Cross Commandos: Both the SRC and the Green Cross organizations are active in urban and periurban areas of the country. The Red Cross is a private nonprofit entity supported by donations. It operates first-aid posts, as well as an ambulance service and a blood donating center that averages 200 donors a month. The Red Cross and Green Cross provide most of the available ambulance service for the country, since hospital-based ambulances do not pick up patients. Since 1979, Red Cross activity in the country has markedly increased. In 1982, the organization treated over a quarter million patients: there were 63,000 visits to emergency clinics for first-aid and minor surgery, 165,000 visits to first-aid posts, 5,300 visits by displaced persons, and 146,000 persons were transported via ambulance. In 1983 the Red Cross operated 85 ambulances. Population coverage was approximately 2,348,000 persons or almost 50% of the population. The SRC has approximately 4,000 volunteers in the country who are trained in first-aid, and a paid staff of 85 persons.

There are two Green Cross organizations in the country which have been providing emergency medical services and clothing to the displaced throughout the conflict zones. The Green Cross and the Green Cross Commandos function in much the same way as the SRC.

### 3.2 Early Warning

Drought and Food Shortage: The agriculturally oriented economies of Central America are highly vulnerable to climate variability. Severe drought and flooding have historically led to crop failures, economic losses, and food-security problems in the area. An Early Warning Program, sponsored by the Agency for International Development's Office of U.S. Foreign Disaster Assistance (AID/OFDA), was developed in 1983 to provide information on food shortages triggered by climatic events. It is based on biweekly weather assessments and monthly assessments of crop conditions and can provide reliable information 30-60 days before harvest. El Salvador is a part of this early warning network, which includes all of Central and South America.

Storm Warnings: The Salvadoran Meteorological Service operates a network of meteorological stations and collects, evaluates, and publishes climatic, agrometeorological, and hydro-meteorological information. It also issues storm warnings, but the country does not have the system or organization necessary for the timely evacuation of people.

Seismic Network: The need to reduce earthquake hazards and prepare for disasters was reinforced by the Guatemalan earthquake in 1976. AID is currently funding an earthquake hazard reduction project which has permitted the Salvadorans to continue a program that was interrupted in 1980 by political problems. Technical equipment provided through the program consists of instruments for a 17-station seismograph network and 20 strong-motion instruments to record data from felt earthquakes. Engineers will use this data to design earthquake-resistant buildings. Technical training for Salvadoran scientists and technicians from the Centro de Investigaciones Geotecnicas, Department of Seismology, is being provided by the U.S. Geological Survey.

Major zones of seismic activity cross the boundary between Guatemala and El Salvador. Regional earthquake hazards are being addressed through scientific and technical cooperation between the two countries.

### 3.3 Health Resources

Medical Facilities and Programs: There are two providers of health services in El Salvador: the Salvadoran Social Security Institute (ISSS) and the Ministry of Health and Social Services (MSPAS). ISSS is an

autonomous institution which insures workers and their families against illness and accidents and funds old age pensions. It provides services through seven urban clinics and one hospital in San Salvador, with coverage limited to 6% of the population. (ISSS does not cover rural workers.) MSPAS delivers health services to the rest of the population through a multi-tiered system of hospitals, health centers, units, and posts, and vaccination and mobile community posts.

The country is divided into five health regions and all facilities are the responsibility of the Ministry of Health. Hospitals, located in the major cities of each department, provide both in-patient and out-patient care. Health units, health posts, and community health posts provide service to out-patients exclusively. Only the health units have permanent doctors and nurses; health posts are visited one to three times weekly by doctors and nurses and attended by auxiliary nurses other days. Health posts are located in small towns throughout the country. Community health posts, located in marginal urban communities, are visited two or three times weekly by a doctor, nurse, and auxiliary nurse.

Despite the extensive health infrastructure, distribution of services is heavily skewed in favor of urban areas. In 1981, the San Salvador metropolitan area, with 16% of the population, had 36% of the Ministry's hospitals, more than 50% of the country's hospital beds, and more than 70% of the doctors. In order to improve health services to under-served rural areas, the government has adopted a new approach to rural health care. The main thrust of the plan is to develop a cadre of community-based health aides, and formalize the position of village midwife in the hopes of making Government health services more acceptable to the rural population.

In 1983 there were approximately 300 Rural Health Workers, covering 10% of the rural population. These workers are trained to provide basic medical aid and to teach health education. They promote use of latrines, nutrition for pregnant women and infants, and family planning. They live in the communities they serve and work full-time visiting households.

MSPAS also trains Traditional Birth Attendants, who assist approximately 65% of all deliveries. By 1984, MSPAS planned to have trained 1,050 attendants. They practice traditional midwifery, and also encourage pregnant women to attend the rural clinics for health care and family planning education.

MSPAS Services in 1982

| <u>Service</u>            | <u>Coverage</u>                           |
|---------------------------|---|
| Potable water             | 55% of total population                   |
| Waste disposal            | 51% of total population                   |
| Immunization of children  | 46% of children under one year            |
| Pre/postnatal health care | 26% of pregnancies                        |
| Child health care         | 45% of children under one year            |
| Family planning           | 15% of women from 15-45 years             |
| Supplementary feeding     | 7% of malnourished children under 5 years |
| Institutional births      | 33% of deliveries                         |

MSPAS Health Infrastructure By Region, July 1984

| <u>Health Region</u> | <u>Hospitals</u> | <u>Health Centers</u> | <u>Health Units</u> | <u>Health Posts</u> | <u>Community Posts</u> |
|----------------------|------------------|-----------------------|---------------------|---------------------|------------------------|
| Western              | 3                | 2                     | 21                  | 29                  | 7                      |
| Central              | 2                | 1                     | 14                  | 24                  | 6                      |
| Metropolitan         | 5                | 1                     | 24                  | 3                   | 8                      |
| Para-Central         | 2                | 2                     | 15                  | 31                  | 1                      |
| Eastern              | 2                | 4                     | 23                  | 47                  | 5                      |
| TOTAL                | 14               | 10                    | 97                  | 134                 | 27                     |

Establishments Not Currently Being Used, July 1984

| <u>Health Region</u> | <u>Hospitals</u>     | <u>Health Centers</u> | <u>Health Units</u>  | <u>Health Posts</u>                         | <u>Community Posts</u> |
|----------------------|----------------------|-----------------------|----------------------|---|------------------------|
| Western              | 1-under construction | 1-under construction  | 1-under construction | 15-closed for lack of supplies or personnel | -                      |

| <u>Health Region</u> | <u>Hospitals</u> | <u>Health Centers</u> | <u>Health Units</u>                         | <u>Health Posts</u>                         | <u>Community Posts</u>       |
|----------------------|------------------|-----------------------|---|---|------------------------------|
| Central              | -                | -                     | 1-closed for lack of supplies/<br>personnel | 15-closed due to civil strife               | -                            |
|                      |                  |                       | 3-under construction                        | 2-under construction                        |                              |
| Metropolitan         | -                | -                     | -   | 1-closed due to civil strife                |                              |
| Para-Central         | -                | 2-under construction  | 1-under construction                        | 4-closed for lack of supplies/<br>personnel | -                            |
|                      |                  |                       |   | 4-closed due to civil strife                |                              |
| Eastern              | -                | 2-under construction  | 5-closed due to civil strife                | 17-closed due to civil strife               | 3-closed due to civil strife |
| TOTAL                | 1                | 5                     | 11  | 58  | 3                            |

Bed Availability by Region, 1984

Metropolitan Region:  
San Salvador

|                           |       |
|---------------------------|-------|
| Hospital Rosales          | 697   |
| Hospital Benjamin Bloom   | 365   |
| Hospital de Maternidad    | 362   |
| Hospital Psiquiatrico     | 504   |
| Hospital Neumologico      | 508   |
| Health Center San Bartolo | 73    |
| Subtotal                  | 2,509 |

Bed Availability by Region, 1984

|                             |   |       |
|-----------------------------|---|-------|
| <u>Western Region:</u>      |   |       |
| Ahuachapan                  | Hospital San Fco. Menedez               | 106   |
| Santa Ana                   | Hospital San Juan de Dios               | 742   |
|                             | Health Center Metapan                   | 55    |
|                             | Health Center Chalchuapa                | 59    |
| Sonsonate                   | Hospital San Juan de Dios               | 243   |
|                             | Subtotal                                | 1,205 |
| <u>Central Region:</u>      |   |       |
| Chalatenango                | Hospital Luis Edmundo Vasquez           | 116   |
| La Libertad                 | Hospital San Rafael (Sta. Tecla)        | 203   |
|                             | Health Center Nueva Concepcion          | 28    |
|                             | Subtotal                                | 347   |
| <u>Para-Central Region:</u> |   |       |
| Cuscatlan                   | Health Center Suchitoto                 | 60    |
|                             | Health Center Cojutepeque               | 77    |
| Cabanas                     | Health Center Sansuntepeque             | 80    |
| La Paz                      | Hospital Santa Teresa<br>(Zacatecoluca) | 254   |
| San Vicente                 | Hospital Santa Gertrudis                | 200   |
|                             | Subtotal                                | 671   |
| <u>Eastern Region:</u>      |   |       |
| Usulután                    | Hospital San Pedro                      | 243   |
|                             | Health Center Santiago de Maria         | 80    |
| San Miguel                  | Hospital San Juan de Dios               | 318   |
|                             | Health Center Ciudad Barrios            | 60    |
| Morazan                     | Health Center San Fco. Gotera           | 73    |
| La Union                    | Health Center La Union                  | 73    |
|                             | Health Center Santa Rosa de Lima        | 61    |
|                             | Subtotal                                | 908   |
|                             | Total                                   | 5,640 |

Source: MSPAS, March 1984.

Health Personnel: Recent health care development programs in El Salvador have focused almost exclusively on facility construction while neglecting investments in human resources. Shortages and poor distribution of existing health care personnel have precluded much of the population from receiving adequate care. For many of the rural poor, pharmacists and traditional practitioners remain the principal health care providers. Although the government recognizes the problem, programs have not been tailored to actual manpower needs.

Trained health professionals tend to congregate in the major urban centers, where salaries and benefits are the greatest.

The public health system has been traditionally dependent on the medical and surgical services provided by young physicians, both those who serve the Ministry during their year of obligatory service at the end of their medical education, and residents. The National University of El Salvador, including the School of Medicine, was closed in 1979, cutting off an annual output of approximately 400 doctors per year. As an interim measure, from 1980 to 1984, the medical school faculty set up "store front" facilities in San Salvador in an attempt to continue the education of physicians. The university reopened for classes in September 1984, but the physical facilities had been heavily damaged.

As of June 30, 1982 there were also four private medical schools with a total of 833 students. Two schools, Universidad Alberto Masferrer (329 students) and Universidad Evangelica de El Salvador (395 students) are located in San Salvador. The others are Universidad Nueva San Salvador in Santa Ana (25 students) and the Universidad de Oriente in San Miguel (84 students).

The physician to population ratio was estimated at 3.2 physicians per 10,000 in 1981 according to official statistics. The brunt of health care delivery falls upon nurses. Graduate and auxiliary nurse training has continued uninterrupted in the eight schools throughout the country. Health posts (except where closed), units, centers, and hospitals throughout the country have sufficient nursing staff. In some cases, facilities in areas of conflict are over-staffed, having absorbed nurses from closed facilities.

#### Medical Personnel in Selected Hospitals

| <u>Location</u> | <u>Staff Surgeons<br/>(certified)</u> | <u>Residents</u> | <u>Other MDs</u> | <u>Grad RN</u> | <u>Auxil RN</u> |
|-----------------|---------------------------------------|------------------|------------------|----------------|-----------------|
| Chalatenango    | 1                                     | 8                | 1                | 19             | 44              |
| SF Gotera*      | 2                                     | 7                | 1                | 10             | 30              |
| Cojutepeque*    | 1                                     | 6                | 4                | 12             | 40              |
| San Vicente     | 0                                     | 14               | 8                | 28             | 72              |
| Usulután        | 3                                     | 3                | 12               | 27             | 69              |
| San Miguel      | 5                                     | 20               | 12               | 34             | 155             |
| S. Tecla        | 11                                    | 20               | 20               | 47             | 85              |
| Rosales         | 23                                    | 50               | 125              | 92             | 330             |
| Bloom           | 10                                    | 50               | 90               | 80             | 160             |
| Military        | 26                                    | 50               | 120              | 100            | 250             |

\* Health Centers

Source: El Salvador Project Paper: Health Systems Vitalization, September 1983.

Health Services for Displaced Persons (DPs): The majority of displaced persons, who are dispersed among the general population, have access to the regular health care facilities run by MSPAS. Their nutrition and health status is affected by limitations on their earning power, agricultural production for home consumption, and by the quality of public health services locally available. The Salvadoran government and private voluntary organizations (volags) have organized distribution centers, mobile medical units, and administrative staff to provide rudimentary health and sanitary facilities/service for the DP camps and cluster-settlements which have sprung up in all of El Salvador's fourteen departments. Health conditions and services in camps range from adequate to severely deficient.

Some of the camps of non-registered DPs are particularly in need of improved health care services. Improvements in settlements of non-registered DPs have been difficult because of inadequate resources, the reluctance of some administering volags to accept U.S. Government assistance, and to some extent, lack of coordination among volags.

CONADES, the GOES organization, provides food, medicine, clothing, blankets, and shelter to the largest number of displaced persons, both in camps, and at distribution centers in the larger towns. CRS/Caritas also runs a large program, distributing food, clothing, medicine, and other assistance. The organization runs a medical clinic for the displaced in San Salvador, and a large settlement, known as the Caritas Camp, in San Vicente. The International Red Cross (ICRC) assists displaced persons in areas inaccessible to other relief organizations. The National Red Cross and the Green Cross provide emergency transport and outpatient medical care. See also Section 3.11, USAID Program, and 3.12, Voluntary Agencies and International Organizations.

#### 3.4 Food Storage and Distribution

Most food losses in El Salvador occur during storage. Basic grains and legumes which are harvested in September and December must be stored for consumption throughout the rest of the year, thus increasing the likelihood of infestation or spoilage. In addition, the most common method of storage -- piling the food inside a small grass hut -- only increases the chance of losses. The use of large galvanized tanks to store grain, with a chemical added to reduce losses from weevils, is increasing; however, this method is still beyond the means of many families and communities.

Commercial warehouses for grains are readily available throughout the country. The Ministry of Agriculture and Livestock maintains open and closed warehouses and silos; major coffee and sugar producers have warehouses on their grounds, and ports and railway centers also have warehouse space.

U.S. P.L. 480 Title II assistance, channeled through the U.N. World Food Program, provides basic foods for displaced persons, Food-for-Work Programs, and maternal-child care programs. The P.L. 480 commodities are stored and distributed mainly by CRS/Caritas, CONADES, and DIDECO. They maintain warehouses in the following locations:

CRS/Caritas: Santa Ana, San Salvador, San Vicente, San Miguel, Santiago de María.

CONADES: San Salvador at the Zona Franca called San Bartolo and the Motel Royal, San Miguel at the FERTICA factory.

DIDECO: Zapopitan, San Miguel, San Salvador at Texas Instrument.

A study is currently being conducted (under an AID contract) to improve the CONADES system of food deliveries to the displaced. A more efficient method to receive food at the ports, store it, and move it by rail and truck to central warehouses near major population centers is being devised.

### 3.5 Housing

Because ethnic and cultural diversity is minimal, Salvadoran settlement patterns vary only with location (urban or rural) and economic status. Highly skewed income distribution is reflected in Salvadoran settlement patterns. The majority of the urban and rural population is unable to purchase or rent adequate housing, resulting in a proliferation of high density squatter settlements with substandard construction and inadequate services.

Urban: Marginal settlements dominate the urban landscape. An estimated 60% of the San Salvador metropolitan area population live in marginal settlements. In Santa Ana, El Salvador's second largest city, an estimated 70% of the population lives in marginal housing.

Five types of marginal settlements exist: tuqurios, campamentos, mesones, casas viejas, and colonias ilegales.

#### Urban Settlement and Housing Types, Services, Building Materials, and Locale

| <u>Settlement Type</u> | <u>Builder</u>                       | <u>Materials</u>                    | <u>Water/<br/>Sanitary<br/>Facilities</u> | <u>Electri-<br/>city</u> | <u>Housing<br/>Type &amp;<br/>Locale</u> |
|------------------------|--------------------------------------|-------------------------------------|---|--------------------------|--|
| Tuqurios               | Household/<br>informal<br>contractor | Debris or<br>scrap (card-<br>board, | Potable<br>water<br>(standpipe            | Generally<br>available   | Apartments;<br>tenements;<br>located     |

| <u>Settlement Type</u> | <u>Builder</u>                        | <u>Materials</u>  | <u>Water/<br/>Sanitary<br/>Facilities</u>                           | <u>Electri-<br/>city</u> | <u>Housing<br/>Type &amp;<br/>Locale</u>  |
|------------------------|---------------------------------------|---|---|--------------------------|---|
| Tugurios<br>(cont'd.)  |                                       | plastic,<br>wood), baja-<br>reque or<br>adobe   | or trucked<br>in)/pit<br>latrines                                   |                          | along ra-<br>vines,<br>streambeds,<br>public<br>lands and<br>easements                      |
| Campa-<br>mentos       | Government                            | Wooden struc-<br>ture and<br>walls, cement<br>floor,<br>asphalted<br>cardboard<br>or aluminum<br>roof   | Piped<br>water/<br>shared<br>toilet                                 | Generally<br>available   | Provisional<br>post-1965<br>earthquake<br>housing on<br>public land<br>(in San<br>Salvador) |
| Mesones                | Private<br>contractor                 | Floors:<br>cement or<br>soil-cement.<br>Walls: baja-<br>reque, wood,<br>metal sheets,<br>or debris  | Piped<br>water/<br>shared<br>toilet                                 | Generally<br>available   | Apartments;<br>tenements<br>located in<br>central city<br>area                              |
| Casa                   | Private<br>contractor                 | Floors:<br>cement or<br>mud and<br>cement<br>bricks.<br>Walls:<br>bajareque,<br>metal sheets<br>or wood.<br>Roof: alumi-<br>num sheets or<br>tile | Piped<br>water/<br>shared<br>toilet                                 | Generally<br>available   | Old, central<br>city houses<br>converted to<br>multi-family<br>units                        |
| Colonias<br>Ilegales   | Private<br>contractor<br>or household | Same as<br>materials<br>in tugurios:<br>cement and<br>bricks with<br>asbestos<br>cement roofs   | Potable<br>water<br>(standpipe<br>or trucked<br>in)/pit<br>latrines | Generally<br>available   | Single<br>family units<br>on periphery<br>of city on<br>steep ter-<br>rain                  |

Source: Urban and Regional Development Study (EDURES), 1978.

Rural: Colonias chorizos, a rural counterpart to urban marginal settlements, are long, high density rows of crude housing. Ccionias chorizos are located on narrow strips of land between large agricultural tracts and principal road networks.

Locally available hand-made housing materials are typical; a one-room adobe structure with a dirt floor and tile roof is most common, followed by bajareque (mud supported by a framework of small tree branches, split bamboo, adobe, straw or grasses). Roofs are thatched with sugarcane leaves or grass. Since bajareque cottages are not durable, adobe dwellings are preferred by rural residents. Rural kitchens are generally separated from the rest of the house.

Principal fuels for cooking are wood, corn cobs, husks and stalks, and bagazo (sugar cane); tobacco stems are also used. Kerosene lanterns are the most common source of light. Latrines are rare. Rivers or springs supply water for half of the population while community wells or public standpipes are other sources. Pilas (open basins to collect rainwater from roofs) supply water for washing. Water is distributed either by filling metal containers if the water source is close, or by collecting water from a public tap or stream in 50-gallon barrels set on carts.

Housing Institutions: Housing and infrastructure institutions do not have the resources or the administrative capacity to meet the demand, and housing problems have increased with the displacement of families from conflict zones. One-half of the total population lives in marginal communities in San Salvador or in sub-standard conditions in secondary cities and rural areas.

Low production and disparate policies plague the housing sector. There is no central housing institution, but rather, a number of institutions with different lending policies. The most important institutions are the Instituto de Vivienda Urbana (IVU); the Savings and Loan System, which includes its regulatory body, the Financiera Nacional de la Vivienda (FNV), and its eight associations; the Fondo Social para la Vivienda (FSV); and the Fundacion Salvadorena de Desarrollo y Vivienda Minima (FUNDASAL).

IVU, the Urban Housing Institute, was created in 1950 to provide housing for low-and middle-income families. It concentrated on the latter group until the late 1970s, when it initiated a small upgrading program (Acceso al Bienestar Comunitario, or A.B.C.) for families in tugurios and other sub-standard areas. IVU has liquidity problems due to past low lending rates (interest rates have been raised to the 12% maximum allowed by law) and inadequate loan collections.

FNV, the Housing Finance Bank, is part of the Savings and Loan System, which was nationalized in 1980. The system has traditionally been the main link with private sector builders, providing the major share of interim construction finances. Most loans have been made to middle- and

upper-income families, although the highest demand is from the low-income population.

FSV, the Social Fund for Housing, established in 1973, is the largest housing finance institution. Its resources come from a 0.5% payroll tax on the wages of participating workers, a 5.0% contribution from employers, and GOES contributions. While FSV has the largest resource base of all the housing institutions, it has serious liquidity problems because of its lending policies, e.g., requiring no down payments, subsidized interest rates (as low as 5-7%), and poor collections.

FUNDASAL, the Salvadoran Foundation for Minimal Housing, formed in 1970, is the only non-profit private sector housing institution in El Salvador. It has concentrated its efforts on squatter areas and crowded tenements in urban centers. Its projects have included extensive self-help and mutual-help components that have reduced unit costs. Lending policies include highly subsidized interest rates as low as 0.3%.

The Sub-Secretariat for Housing and Urban Development, a dependency of the Ministry of Public Works, has the necessary framework to serve as a coordinator for the housing sector. However, partisan political issues have reduced its authority. In 1984, it published a four-year National Housing Plan and a low-cost housing demand analysis. The new GOES administration is seeking to change the charter and performance of all the housing organizations.

Water Supply: In urban areas, the National Administration of Water Supply and Sewerage (ANDA, Administracion Nacional de Acueductos y Alcantarillados) provides water and sewerage services to towns with over 2,000 people. The Ministry of Health (MSPAS) provides these services to the rural areas through PLANSABAR (Plan Nacional de Saneamiento Basico Rural).

The demographic explosion, poor conservation methods, and agricultural and industrial pollution have led to the disappearance of clean surface waters. Consequently, ANDA and PLANSABAR have been forced to draw exclusively from groundwater sources. Insufficient water flow and frequent breaks in supply, as a result of electric power cut-offs, increase the risk of contamination and the incidence of water-borne diseases. About 29% of the urban population and 41% of the rural population have access to potable water, either through house connections or public standpipes.

Provisions for sewerage and pollution disposal are also inadequate. As of December 1983, about 53% of the urban population, or about 1.1 million people, had access to a sewerage system, and 30% of the rural population, or about 870,000 people, had access to latrines.

Subversive action and the 1982 natural disasters (storm and earthquake) damaged the country's water services infrastructure. Approximately 89% of the estimated losses occurred in the Central Zone (around San Salvador and in the areas of heavy conflict).

### 3.6 Ground Transportation

Roads: The Ministry of Public Works (MOP) is responsible for urban and rural roads. It maintains one of Central America's better road systems. (See also Section 1.21, Roads.)

Aerial reconnaissance, conducted to assess damage due to subversive action, revealed heavy damage to secondary roads and bridges in the Western Zone from the 1982 floods. Storm damage was actually greater than the estimated losses from subversive action, but more detailed studies were carried out to assess the latter.

From 1979 to August 1982, bridge and equipment losses due to civil strife totaled about \$16.5 million, three-quarters of which occurred in the Eastern Zone and half of which was the result of damage to the Puente de Oro bridge. As of mid-1982, there were 55 damaged bridges (of a total of 260), and equipment losses to the MOP amounted to \$1.2 million. Aside from the cost of reconstruction, the cost to the general economy is significant. In some areas, there are no alternative transportation routes and, even where they do exist, the longer distances and poor condition of the roads increase the transportation costs of goods and services, shorten the service life of equipment, and increase the demand for imported spare parts.

Railroads: The national railroad system (FENADESAL) is managed by the Port Authority (CEPA). Import and export cargo is moved by rail throughout the country, reaching the Salvadoran ports of Cutuco and Acajutla, Puerto Barrios in Guatemala, and Tecun Uman on the Guatemalan-Mexican border. It also carries local cargo and passengers within the country. Seventeen diesel-electric locomotives are normally available for operation.

There are three lines, or Districts. District 1, which carries the largest volume of cargo, runs from San Salvador to Cutuco. Service had been reduced to a minimum by the end of 1983 due to the destruction of several bridges. District 2 runs from San Salvador to Metapan and on into Guatemala. Its service has also been reduced due to a decrease in factory output and heavy competition by trucking companies. District 3, running from the capital to Acajutla, has continued normal service.

Guerrilla activity has effectively put 8 locomotives and 70 cargo units out of operation and depleted stocks of spare parts. Rolling stock is so old that new parts must be manufactured to specifications, which is both costly and time consuming. Most repairs have been made by depleting spare parts inventories and stripping other equipment.

The railroad track and rolling stock are functional for present uses, but the system is expensive to run and outdated. Proposals for improvement, including acquiring light-weight cars and electrification of the system, are under consideration. However, the rail system is at risk as

long as subversive activities continue, and this limits prospects for major new investment.

### 3.7 Ports

Acajutla is a major Central American port, serving the western part of El Salvador. It has road and rail connections to San Salvador and Santa Ana. On an open bay, Acajutla is a direct docking port with eight berths spread along three piers.

Installations: Pier A is 800 m long and 37 m wide. Water depth varies between 10 and 12 m, and the altitude of the pier deck above mean water level (M.W.L.) is 6.1 m. The two berths of this pier are capable of handling general, bulk, and liquid cargo because there are two 3-ton capacity electric cranes and pipelines installed on the pier. There is a transit warehouse with a potential area of 4,500 sq. m.

Pier B is 360 m long on the north side and 336 m long on the south side, and 28 m wide. Medium water depth varies from 10 to 12 m; altitude of the pier deck is 4.8 m above M.W.L. Although its four berths handle general cargo and containers, the pier is mainly used for bulk cargo, for which it has a mobile crane and a conveyor belt system.

Pier C was built as an extension of Pier A to function mainly as a breakwater. It has facilities for the docking of tankers up to 40,000 d.w.t. It is 301 m long and 19 m wide. It has two berths, mainly for liquid cargo, but also for bulk and general cargo. Because of its location, medium water depth reaches 13.5 m, the deepest of all the piers. Deck altitude is 5 m above M.W.L.

There is also an off-shore four-buoy mooring facility, with a water depth of 15 m, for discharge of oil directly into the refinery of Acajutla by means of two pipelines.

Storage: The land facilities include four warehouses, with a storage area of 22,200 sq. m and nine roofed modules for general cargo with an area of 10,000 sq. m. There is a 24,500 sq. m yard for automobile storage; 24,500 sq. m for general cargo; 74,000 sq. m for future storage of containers; and two bulk cargo warehouses, one with a 12,000-ton capacity and the other with an 18,000-ton capacity.

Equipment: There is sufficient equipment to handle requirements. Available are six cranes (mobile and electric), 98 forklifts, 23 industrial tractors, 23 payloaders, 7 trailer trucks, 52 mobile platforms, 6 crawler tractors, two 30-ton straddle carriers, and 10,000 wooden pallets. There are five mobile chain unloaders, two bulldozers, and nine clam-shell buckets. The port also has four tugboats of 800, 1,200, 1,400, and 1,700 HP for docking and undocking. Pilotage is available at any time and compulsory. Provisions and water are available; minor repairs are possible.

Future Development: A project for a container pier (300 m long, equipped with a 40-ton capacity crane, storage area of 10,000 sq. m, and a yard of 103,000 sq. m) forms the third phase of the on-going expansion of the Port of Acajutla. Construction has been delayed, however, due to lack of funds.

Cutuco is El Salvador's second port, located in the Gulf of Fonseca, 3.2 km from the town of La Union and 252 km by railroad from San Salvador. (The railroad has exclusive and direct access to its berths.) The port serves the eastern part of the country, primarily handling coffee and cotton exports. Cutuco has a good natural harbor about 5.6 km wide, with strong tidal currents.

Installations: There is a modern concrete pier with two berths for the handling of general, dry bulk, and liquid bulk cargo.

| <u>Berth</u> | <u>Length</u> | <u>Width</u> | <u>Draft</u> |
|--------------|---------------|--------------|--------------|
| North        | 152 m         | 7.6 m        | 9.15 m       |
| South        | 174 m         | 6.1 m        | 7.62 m       |

Equipment: The port has 2 mobile cranes with a capacity of up to 10 MT, 9 fork lifts with a capacity of 4 MT, 5 clamshells with a capacity of one cubic yard each, and 2 tugboats. To handle liquid cargo, there are pipes on the pier that are connected to privately-owned inland tanks.

Storage: A covered area of 26,170 sq. m comprises seven warehouses, including one for imports, owned by Customs. There is also an open yard of 482,824 sq. m. A system for the transportation of imported cargo, called the Guia Interaduanal (Inter-Customs Guide) provides for transportation from the port to any customs warehouse in the country.

Both the Ports of Cutuco and Acajutla operate all year round, 24 hours a day. National holidays are observed, but special arrangements and overtime pay will keep the ports open.

### 3.8 Airports

The El Salvador International Airport began operating in January 1980, replacing the former international airport located at Ilopango. It is located in Comalapa, south of the capital.

Location: Lat. 13°26'23"; long. 89°03'20"; elev. 25 to 40 m

Equipment: Omni-directional VHF Radio Beacon; Instrument Landing System; Distance Measuring Equipment; Non-directional Radio Beacon; Visual Approach Slope Indicator; Approach Lights Systems; Meteorological Equipment; Precision Instruments Approach.

The main runway is 3,200 m long and 45 m wide. A secondary runway, 800 m long, handles small aircraft. The airport was developed to meet the forecasted demand in 1985 of 2,600 passengers on peak days, and in 1990 of 3,900. The layout provides for even further expansion.

The passenger aircraft ramp has room for six simultaneous loading operations, two wide-bodied (B-747) and 4 standard (B-707) jets, with an extra parking position in case of overflow. There is an underground fuel delivery system. A freight terminal occupies an area of 7,900 sq. m, 73% of which is used for warehousing. Three aircraft parking positions are available adjacent to the freight terminal for all cargo operations.

Other facilities include fuel storage and supply, a fire station, an emergency power plant, a sewage treatment plant, an airport maintenance building, an incinerator, and a treatment plant for potable water.

Because of the small size of the country, there are no other major or secondary airports (the Ilopango Airport is now a military airbase), only numerous small grass landing strips, both private and military, throughout the country.

### 3.9 Energy Resources

The national power agency, the Executive Hydroelectric Commission of the Lempa River (Comision Ejecutiva Hidroelectrica del Rio Lempa - CEL) has a well developed grid of high-voltage lines linking major towns, cities, and generating plants. CEL generates approximately 92% of the nation's electric power and the rest is generated by private companies, which also distribute power in urban areas.

Although CEL produces most of the country's power requirements, it only distributes about 10% of the power, generally to sparsely populated rural areas, where distribution costs are high. The remaining 90% is distributed by private companies. The principal distribution company is the Electric Light Company of San Salvador (Compania de Alumbrado Electrico de San Salvador - CAESS), which services the capital and urban centers in the central geographical zone, and San Miguel and La Union in the eastern zone. CAESS distributes 73% of the power produced by CEL and has 64% of the total number of consumers. CAESS also has small hydroelectric and steam-powered generating plants of its own.

El Salvador has sufficient installed capacity to produce electricity entirely through low cost hydroelectric and geothermal sources and still be a net exporter of power. The system is self-sufficient, with renewable natural resources under normal operating conditions and demand. However, intense sabotage directed at high voltage transmission lines has necessitated abnormally high use of standby oilfield generators. The GOES has incurred substantial costs for fuel to maintain continuous electrical service.

A damage assessment in December 1982 reported that CEL was losing towers and temporary poles on an almost daily basis; 235 115KV towers had been damaged. Costs amounted to about \$6 million in damage to transmission lines and installations, and about \$12 million for fuel for power generation.

CEL has a rapid response capability for line repair through the use of a helicopter for reconnaissance and transportation of crews and equipment. Also, USAID has provided funding for the construction of a 22.1 MW gas turbine generator in San Miguel. This plant makes it possible to provide continuous power in the Eastern departments when transmission lines to San Miguel are out of service.

CEL total capacity: 412 MW hydroelectric, 150.3 MW thermal, 95 MW geothermal for a total of 657.3 MW. El Salvador has no known coal deposits.

Electricity supply: 110 volts, 60 cycles, 1 phase (standard); 220 volts, 60 cycles, 3 phases (industrial sites); 440 volts, 60 cycles, 3 phases (utilities and industrial sites).

### 3.10 U.S. Mission Disaster Relief Plan

The Mission Plan was updated in August 1984. It details the responsibilities of the Chief of Mission, the Mission Disaster Relief Officer (MDRO), and the Emergency Action Committee. The plan includes information on how and when the USG becomes involved when a disaster occurs, the role of the U.S. Office of Foreign Disaster Assistance (OFDA), and the U.S. Department of Defense. A list of GOES agencies, international and private voluntary organizations, and their emergency functions is also included. Mission resources (vehicles, medical supplies, radio and telephone facilities, etc.) are detailed, as well as the names and locations of disaster-related reference information. The plan is available at the U.S. Mission in El Salvador and at OFDA in Washington, D.C.

### 3.11 USAID Emergency Program

USAID's emergency program entitled Health and Jobs for Displaced Persons was initiated in May 1982 to give assistance to the Salvadorans who were uprooted from their homes by the civil war.

In 1979-80, as violence increased in rural areas, more and more families were forced to migrate to more secure areas. As their numbers grew, the GOES created the National Commission for Displaced Persons (CONADES) in late 1981. CONADES' responsibility was to evaluate the displaced person problem and coordinate assistance.

The first step, carrying out a census of the displaced, was complicated by the fact that the displaced were intermingled with the general population, often living with friends and relatives or in marginal communities outside of larger towns where it was difficult to distinguish them from the local population. To solve this problem, the displaced were asked to register with Local Committees for Assistance for the Displaced (CLADs), which were created under the auspices of CONADES and comprised of members of the clergy, leaders from host communities, and local government officials. By December 1981, approximately 164,300 people had registered. In April 1984, however, it was estimated that there were possibly as many as 200,000 displaced persons who were not registered with CONADES. (See also Section 2.8.)

The GOES subsequently requested AID assistance in providing for the basic needs of the displaced population, and AID agreed to provide employment, food, and health assistance on an emergency basis. The resulting AID program provided resources to carry out (1) small public works projects to provide employment opportunities; (2) preventive and curative health services; and (3) the distribution of PL-480 Title II food assistance.

The objective of the jobs program was to provide cash employment to members of displaced families through the provision of community improvement and environmental and sanitation projects. The health component objectives were to protect the displaced and residents of the host communities through the immunization of children most vulnerable to the principal communicable diseases, and to provide curative health services and health supplies to displaced families, especially those residing in camps and other high density living areas.

Food assistance has been provided through the World Food Program (WFP) from PL-480 Title II stocks and has been distributed primarily by CONADES.

Target Population and Project Outputs, 1983

|                                     | <u>1/20/83</u> | <u>6/20/83</u> | <u>12/31/83</u> |
|-------------------------------------|----------------|----------------|-----------------|
| 1. Displaced Population             |                |                |                 |
| A. Nationwide                       | 230,000        | 257,000        | 263,000         |
| B. Project Area<br>(7 of 14 Depts.) | 162,000        | 200,000        | 175,000         |

|   | <u>1/20/83</u> | <u>6/20/83</u> | <u>12/31/83</u> |
|---|----------------|----------------|-----------------|
| 2. Vaccinations<br>(Cumulative)                       |                |                |                 |
| A. Children   | 4,000          | 150,000        | 270,000         |
| B. Pregnant Females                                   | 100            | 10,000         | 30,000          |
| 3. Curative Health                                    |                |                |                 |
| Number of Home Visits                                 | ---            | 27,035         | 95,062          |
| 4. Employment Generation<br>(Cumulative Except B & E) |                |                |                 |
| A. Projects Approved                                  | 81             | 320            | 562             |
| B. Projects Underway                                  | 38             | 177            | 151             |
| C. Projects Completed                                 | 8              | 66             | 350             |
| D. Number of Job<br>Positions Created                 | 1,811          | 16,265         | 29,446          |
| E. Number of DP's<br>Working                          | 1,652          | 9,984          | 10,053          |

Public Works Projects, 1983

Types of Projects

Category A (Settlement and Camp Improvements)

Number

|                                |    |
|--------------------------------|----|
| 1. Drainage                    | 7  |
| 2. Latrines                    | 29 |
| 3. Waste disposal              | 6  |
| 4. Potable water maintenance   | 3  |
| 5. Sewage maintenance          | 4  |
| 6. Drainage system maintenance | 2  |
| 7. Rodent extermination        | 6  |
| 8. Marginal area clean-up      | 34 |
| 9. Potable water system        | 1  |
| 10. Lorena stoves              | 1  |

Category B (Host Community Public Works Projects)

|                                    |     |
|------------------------------------|-----|
| 1. Gutter repair                   | 11  |
| 2. Reforestation                   | 5   |
| 3. Soil conservation               | 6   |
| 4. Cobblestone street construction | 121 |
| 5. Drainage system construction    | 2   |
| 6. Road widening                   | 57  |
| 7. Access road construction        | 9   |
| 8. Retention wall construction     | 17  |

|                                      |            |
|--------------------------------------|------------|
| 9. Road bridge construction          | 2          |
| 10. School construction              | 6          |
| 11. Recreation facility construction | 3          |
| 12. Provisional DP housing           | 1          |
| Total                                | <u>333</u> |

Three organizations carry out the USG PL-480 Title II food program in El Salvador: 1) Catholic Relief Services and its local counterpart, Caritas; 2) DIDECO, a GOES agency concerned with community development, through an urban food-for-work emergency project begun in 1980; and 3) the World Food Program.

A detailed description of these programs can be found in Displaced Persons in El Salvador, An Assessment, March 15, 1984, a study funded by USAID, Bureau for Latin America and the Caribbean. See also Section 3.12 for details of CRS programs.

The Project has recently been expanded to provide more assistance to the unregistered displaced; more jobs to accommodate the increasing displaced population; more regular and timely food delivery; and a new supplementary feeding program directed toward those groups suffering high morbidity and mortality rates. Eventually, CONADES will be phased out of the food assistance program, and responsibility given to a private voluntary organization. A pilot relocation program for the displaced who wish to resettle is also planned.

### 3.12 Voluntary Agencies and International Organizations

The major voluntary agencies working in El Salvador are:

Catholic Relief Services (CRS)  
 Apartamentos San Francisco, 4o. Piso #7  
 25 Av. Norte, Fte, Fuente Luminosa  
 San Salvador  
 Tel.: 26-3998  
 Lic. Ana Marin

CARITAS  
 Urbanizacion La Esperanza, Pasaje 3 #124  
 San Salvador  
 Tel.: 26-1042  
 Sr. Daniel Barrera (National Director)

CRS maintains a maternal-child health clinic in San Salvador, and conducts socio-economic development projects in health, nutrition, women's promotion, and agricultural development. CRS also collects and distributes food, clothing, and medical equipment. The only US-based volag distributing PL-480 Title II food, it operates countrywide through CARITAS, its local counterpart. CRS-CARITAS operates a maternal-child feeding program

in all 14 departments through 379 nutrition centers (usually in private homes or church-diocese centers). Central units for food distribution with storage facilities are located in key cities. From there, food is delivered to the rural nutrition centers, where both food and health services are dispensed.

**CESAD**

Comite Evangelico Salvadoreno de Ayuda para el Desarrollo  
45 Avenida Sur #305  
San Salvador  
Tel.: 23-6368  
Lic. Manuel Quinonez

CESAD is a local Protestant volags working mainly with displaced persons.

Cruz Roja Salvadorena (Salvadoran Red Cross)  
17 Calle Pte., Centro de Gobierno  
San Salvador  
Tel.: 22-1752  
Manager: Sr. Oscar Morales

Cruz Verde Salvadorena (Green Cross)  
Condominio El Paseo #107 y 108  
San Salvador  
Tel.: 23-7428; 23-7515  
Administrator: Sr. Juan Evangelista Cuellar  
President: Sr. Oscar Del Cid

Cruz Verde Comandos  
14 Av. Nte. #335  
San Salvador  
Tel.: 21-3832  
Director: Roberto Orlando Cortez Cru.

The SRC and the Green Cross organizations are local volags providing rescue and health services for displaced persons. (See also Section 3.1, Host Country Organizations.)

Plan De Padrinos (Foster Parents Plan)  
Avenida Olimpica y 57 Av. Sur  
Colonia Escalon  
San Salvador  
Tel.: 24-1469  
Sr. Larry Wolf  
Sra. Blanca Lucia de Millard

The Foster Parents Plan offers child sponsorship; programs include health care and community development.

International Committee of the Red Cross (ICRC)  
Comite Internacional de la Cruz Roja  
17 Calle Pte., Centro de Gobierno  
San Salvador  
Tel.: 21-5755; 22-1752  
Sr. Michel Amiguet

The ICRC provides humanitarian assistance and works mainly with unregistered displaced persons. With the Salvadoran Red Cross, the ICRC is carrying out a large-scale food and medical assistance program for the displaced as well as an education campaign. Concentrating its efforts in areas inaccessible to other relief organizations, it has reached about 80,000 people. The ICRC also visits and registers political prisoners and attempts to trace missing persons. An average of 800 people a month seek information from the ICRC offices on missing relatives. The organization has 32 staff members including two doctors and seven nurses.

Lutheran World Relief  
Iglesia Luterana  
Apartado 02-9  
Barrio San Miguelito  
San Salvador  
Tel.: 25-1741  
Rev. Micael Gomez  
Dr. Angel Ibarra  
Sub-Director: Cecilia Alfaro

Lutheran World Relief works mainly in displaced persons camps providing food and health services.

Medecins Sans Frontiers  
Medicos del Mundo  
Cercle Francais  
Av. La Capilla #246, San Benito  
San Salvador  
Serge Ouddane  
Home Tel.: 23-3085

Medecins Sans Frontiers provides medicine and other assistance to the displaced and has extensive experience in health and nutrition programs for refugees.

Mennonite Central Committee  
8a. Av. Norte #1124  
San Salvador  
Tel.: 25-1741  
Sr. Daniel Blake Oatman

The MCC works with the displaced; programs include resettlement, housing, medical education, clinics, food distribution centers, gardens, and maternal-child health.

Overseas Education Fund  
61 Avenida Norte #151  
San Salvador  
Tel.: 23-7748; 24-6825  
Director: Delmy Burgos

The Overseas Education Fund operates a women's food-processing cooperative, agricultural cooperatives, community programs, and literacy education programs; and provides tools, vehicles, and credit/loans. It works mainly with women.

Partners of the Americas  
Calle Arce, 1280  
Edificio Alfaro Monge, 2o. Piso  
Apartado 24  
San Salvador, El Salvador  
Tel.: 21-3946  
President: Elena de Gutierrez

The Louisiana Partners cooperate with the El Salvador Partners. Assistance includes agricultural education, cooperatives, and medical supplies.

Save the Children Federation (SCF)  
Desarrollo Juvenil Comunitario  
Apartado Postal (05)95  
Edificio Palomo 4o. Piso #43  
23 Av. Sur y Calle Ruben Dario  
San Salvador  
Tel.: 21-6653  
Director: David Rogers

SCF works mainly in community development and primary health care and has installed lorena stoves in several DP settlements. SCF has experience in children's programs and in income-generating programs.

Technoserve, Inc.  
Apartado Postal (05)38  
Avenida Las Acacias #130  
Colonia San Benito  
San Salvador  
Tel.: 23-7043  
Ing. Lino Osegueda

Technoserve provides technical assistance to cooperatives and small businesses.

World Vision  
Vision Mundial  
Condominio Los Heroes 12 Piso  
Boulevard de Los Heroes  
San Salvador  
Tel.: 26-0615; 26-2031  
Lic. Norman Tattersal

World Vision provides vocational and literacy education, agricultural training, and health services.

United Nations agencies with offices in El Salvador are the UNDP, WFP, UNIC (Information Center), WHO/PAHO, FAO, and UNFPA (Fund for Population Activities). The Salvadoran coordinating agency is the Ministry of Planning.

The Archdiocese of San Salvador (ASESAH) is currently providing shelter to approximately 3,000 people in sanctuaries, such as churches and church facilities that have been converted into makeshift dwellings. The displaced seeking sanctuary are those who are fearful of registering with the government.

The Knights of Malta and Project Hope worked with AID project officers to process donations of medicines, clothing, and other supplies from many private U.S. donors. The Knights of Malta arranged for customs services, storage, and distribution of these donations; Project Hope insured that all medical donations were needed, properly labeled, and marked with expiration dates. Project Hope will also be working in cooperation with MSPAS to provide primary health care to the displaced.

Some of the organizations listed above are actively involved in providing assistance to the country's displaced population and are experienced in this field. Most of the volags in El Salvador, however, are not experienced, and often concentrate on short-term or person-to-person aid which is sometimes sporadic, cannot be maintained, and focuses on certain limited target populations. Only the ICRC and CARITAS are currently offering a variety of services to significant numbers of displaced persons. These two organizations, along with the Mennonite Central Committee, Save the Children Federation, and World Vision have expertise in working with refugees and displaced persons.

One of the obstacles to volags working in El Salvador is that they are reluctant to work with the GOES or receive funds from the USG, preferring to maintain their neutral status in the continuing civil conflict. Also inhibiting humanitarian assistance are the threats to volags and informal voluntary groups such as students, churches, medical societies, and concerned individuals, who have been intimidated or attacked for providing assistance to the displaced persons who have not registered with CONADES.

### 3.13 Mitigation and the Development Process

El Salvador has a long legacy of economic underdevelopment and social injustice. Political repression, protest, and violence have become endemic. Violence continues to close factories, disrupt commerce and public services, undermine agricultural production, encourage capital flight, and dislocate thousands of rural workers.

The economy has also suffered from external factors such as declining prices for the country's main exports and reduced demand from its CACM trading partners. The government has not had the resources to maintain living standards, provide quality coverage of social services, or deal with the severe humanitarian problems produced by the civil conflict.

El Salvador is also faced with the problems arising from rapid population growth. This places additional pressures on a densely populated rural land base and threatens to aggravate the already serious problem of environmental degradation.

Some of the social and economic programs the GOES has implemented to improve its political and economic situation are:

- (1) agrarian reforms;
- (2) public sector work programs, which employ laborers in land conservation and reforestation programs and in construction of low-cost housing and rural and urban infrastructure; and
- (3) economic stabilization programs, which offer credit to the private sector and provide for the importation of raw materials to expand exports of manufactured goods.

Long range goals include more equitable distribution of the benefits of economic growth, reduced population growth, improved education and health care services, and arrest of environmental and natural resource deterioration. However, in an atmosphere of civil strife and economic and political instability, it is difficult to implement mitigation and development programs.

Appendix A

Average Monthly and Annual Rainfall at Selected Stations (mm)

|                        | <u>Jan-Mar</u> | <u>Apr</u> | <u>May</u> | <u>Jun</u> | <u>Jul</u> | <u>Aug</u> | <u>Sep</u> | <u>Oct</u> | <u>Nov</u> | <u>Dec</u> | <u>Annual</u> |
|------------------------|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------|
| Metapan                | .              | 50         | 180        | 300        | 250        | 240        | 310        | 170        | 20         | 10         | 1,530         |
| Santa Ana              | .              | 70         | 210        | 330        | 330        | 320        | 370        | 190        | 30         | .          | 1,850         |
| Izalco                 | .              | 60         | 250        | 320        | 350        | 350        | 440        | 350        | 60         | 10         | 2,190         |
| Sonsonate              | .              | 50         | 190        | 340        | 300        | 300        | 300        | 360        | 30         | .          | 1,870         |
| Acajutla               | .              | 50         | 170        | 300        | 280        | 260        | 320        | 270        | 40         | .          | 1,690         |
| Ateos                  | .              | 60         | 160        | 280        | 290        | 270        | 300        | 150        | 30         | .          | 1,540         |
| San Andres             | .              | 60         | 200        | 290        | 340        | 270        | 390        | 160        | 40         | .          | 1,750         |
| Santa Tecla            | .              | 50         | 160        | 330        | 330        | 310        | 320        | 240        | 40         | .          | 1,780         |
| San Salvador           | .              | 50         | 190        | 320        | 320        | 300        | 340        | 230        | 40         | .          | 1,790         |
| Ilopango               | .              | 50         | 180        | 290        | 370        | 300        | 370        | 260        | 30         | .          | 1,850         |
| Cojutepeque            | .              | 40         | 200        | 380        | 390        | 350        | 370        | 260        | 50         | .          | 2,040         |
| Chorrea del<br>Guayabo | .              | 80         | 260        | 360        | 380        | 320        | 350        | 240        | 50         | .          | 2,040         |
| San Vicente            | .              | 40         | 210        | 360        | 360        | 340        | 390        | 280        | 50         | .          | 2,030         |
| Zacatecoluca           | .              | 40         | 250        | 400        | 350        | 340        | 470        | 360        | 60         | 10         | 2,280         |
| Santa Cruz<br>Porrillo | .              | 30         | 180        | 300        | 280        | 260        | 350        | 280        | 50         | .          | 1,730         |
| Usulután               | .              | 20         | 90         | 360        | 300        | 280        | 400        | 350        | 60         | .          | 1,860         |
| San Miguel             | .              | 20         | 200        | 300        | 250        | 250        | 370        | 290        | 40         | .          | 1,720         |
| Olomega                | .              | 20         | 210        | 300        | 220        | 230        | 410        | 320        | 40         | .          | 1,750         |
| Cutuco                 | .              | 30         | 250        | 360        | 190        | 240        | 450        | 330        | 50         | .          | 1,900         |

A period (.) indicates less than 10 mm.

Source: Draft Environmental Profile of El Salvador, 1982.

Appendix B

General and Displaced Population of El Salvador  
Percent of Total and Displaced Population by Department

| <u>Department</u> | <u>Population<br/>(1980)</u> | <u>% of Total<br/>Population</u> | <u>Displaced<br/>Population</u> |             | <u>Displaced as<br/>a % of Total<br/>Displaced<br/>Population</u> |
|-------------------|------------------------------|----------------------------------|---------------------------------|-------------|---|
|                   |                              |                                  | <u>1981</u>                     | <u>1984</u> |   |
| Ahuachapan        | 224,900                      | 5.0                              | 1,300                           | 866         | 0.2   |
| Santa Ana         | 405,100                      | 9.0                              | 200                             | 1,741       | 0.5   |
| Sonsonate         | 305,200                      | 7.0                              | 100                             | 4,934       | 1.4   |
| Chalatenango      | 204,500                      | 5.0                              | 38,300                          | 28,060      | 8.2   |
| La Libertad       | 371,390                      | 8.0                              | 1,700                           | 22,119      | 6.5   |
| San Salvador      | 1,050,300                    | 23.0                             | 24,200                          | 67,340      | 19.7  |
| Cuscatlan         | 182,300                      | 4.0                              | 15,200                          | 19,874      | 5.8   |
| La Paz            | 227,500                      | 5.0                              | 600                             | 10,934      | 3.2   |
| Cabanas           | 154,300                      | 3.0                              | 19,600                          | 22,442      | 6.6   |
| San Vicente       | 186,000                      | 4.0                              | 10,000                          | 45,295      | 13.2  |
| Usulután          | 358,600                      | 8.0                              | 14,900                          | 34,072      | 9.9   |
| San Miguel        | 406,700                      | 9.0                              | 4,500                           | 33,144      | 9.7   |
| Morazan           | 186,625                      | 4.0                              | 29,800                          | 48,367      | 14.1  |
| La Union          | 281,100                      | 6.0                              | 3,900                           | 3,341       | 1.0   |
| Total             | 4,544,515                    | 100.0                            | 164,300                         | 342,529*    | 100.0   |

\* Includes 81,341 unregistered displaced (ICRC data).

Sources: Estudios de Poblacion, Ministerio de Planificacion,  
December 1979.

Gersony, Displaced Persons Assessment, Supplementary Volume I,  
1982.

CONADES: Cuadro Resumen de la Poblacion Desplazada, May 31,  
1984.

Appendix C

Displaced Population in Settlements or Camps, May 1984

| <u>Department</u> | <u>Number of Settlements</u> | <u>Population</u> | <u>Percent of Displaced in Settlements</u> |
|-------------------|------------------------------|-------------------|--|
| Sonsonate         | 2                            | 317               | 6.4%                                       |
| La Libertad       | 3                            | 2,021             | 9.1%                                       |
| San Salvador      | 6                            | 1,669             | 2.5%                                       |
| Chalatenango      | 3                            | 487               | 1.7%                                       |
| Cuscatlan         | 2                            | 335               | 1.7%                                       |
| San Vicente       | 3                            | 5,128             | 11.3%                                      |
| Usulután          | 6                            | 2,048             | 6.0%                                       |
| San Miguel        | 3                            | 685               | 2.1%                                       |
| Morazan           | <u>8</u>                     | <u>8,362</u>      | <u>17.3%</u>                               |
| Total             | 36                           | 21,052            | 6.1%                                       |

Three criteria are used by CONADES to define a Displaced Camp or Settlement:

- 1) A minimum of 18 families can qualify.
- 2) Of the settlement population, 95% must be displaced persons.
- 3) Housing must be provisional either in time or materials.

Source: CONADES

## Appendix D

### Executive Summary

(From "Displaced Persons in El Salvador, An Assessment,"  
March 15, 1984. AID/LAC)

1. The overall situation regarding displaced persons has changed in several major regards since 1982. First, the number of displaced persons has increased substantially as has the number of displaced persons as a percentage of the total populations of departmental towns. Second, the ability of displaced persons to obtain jobs and other support in several departmental capitals and rural towns is decreasing.
2. Despite extensive efforts on the part of the GOES, AID and many relief agencies, displaced persons continue to have serious problems. There are indications that in certain pockets the health and nutritional status of refugees may be critical. It is noted, however, that relative to marginal, non-displaced populations, the nutritional status of DPs appears to be better. The difference is probably due to WFP food assistance which has been available to registered DPs throughout El Salvador since 1980.
3. Both preventive and curative health measures have been undertaken which have improved the well being of displaced persons. There are currently no epidemic health problems, as some observers have suggested, nor are any anticipated.

The health component of the Jobs and Health Program, through its vaccination program and oral rehydration promotion, is believed to have helped the DPs, although to what extent is unknown.

However, diarrhea remains a serious problem for children. More effort must be made to clean up the "hygiene loop" in DP camps and concentrations.

4. The nutritional status of many displaced persons is extremely serious. In camps, supplemental feeding programs will be required. These feeding programs should be established in such a way that they become the focal point for delivering a wide range of services to women and children. These programs should provide a "safety net" for women and children so that if the normal ration is delayed, their nutritional needs can be met until normal supplies are restored.

5. The "food basket" available through general feeding programs to displaced persons is designed to provide less than the daily minimum caloric need. The ration was never intended to fulfill all the nutritional needs of displaced persons. The upcoming AID survey of nutritional status in camps and the INCAP survey of the general DP population will provide information which should be used to reassess food needs and adjust food delivery programs as necessary.
6. The Jobs Program, while not meeting some of its original intended objectives, is viewed on the whole as a valuable service to displaced persons. On the average, it has provided steady employment to approximately 10,000 displaced persons per month. It is recommended that the program service area be expanded to include all displaced persons in need, except those residing in the city of San Salvador, and that the budget be increased to enable more people to participate. Increased emphasis should be given to employment opportunities for women and DPs not living in camps or large concentrations. It is recommended that a small capital improvements fund be established to facilitate projects in the DP settlements. No adjustments in the wage scale or the current labor-materials formulas for determining projects is suggested.
7. Tighter controls on existing programs should be initiated. Significant delays in delivering food supplies have been noted which could have been prevented with better monitoring. Adjustments in the Jobs and Health Program to meet identified needs cannot be accomplished unless better information gathering and assessment measures are employed.
8. The registration process, whereby displaced persons become eligible for assistance from the GOES, needs to be reconceptualized. It is estimated that half of those displaced by the fighting hesitate to register with the GOES for assistance because they fear that registration will somehow draw unwanted attention to them.
9. In order to meet the increased needs, more sophisticated program management is required. An independent monitoring and coordination unit is recommended that can assess developments in the displaced population and can target USAID, GOES and voluntary agency resources to problem areas.
10. A data collection and analysis system should be installed which can provide advanced warning of relief problems needing attention. The key concept to be applied is information for program action. Plenty of information is now being collected. Not enough is being analyzed for the purpose of adjusting relief programs.

11. Coordination problems among Salvadoran relief organizations are reducing effective response. Coordination objectives and alternative means to improve overall coordination in specific sectors are suggested.
12. The Ministry of Public Health and Human Services (MSPAS) is viewed as the critical agency for delivering health and nutritional services to displaced persons. The strengthening of this ministry through the provision of technical assistance and financial support is recommended as a critical component of improving the overall delivery of services to displaced persons.
13. The need to reduce the number of DPs currently receiving services should be a priority for the GOES. Establishment of an office within CONADES to coordinate efforts to help DPs reestablish normal lives by means of relocation, return to place of origin, or transition into the community where they now reside is recommended. Suggestions for helping CONADES develop a relocation plan and the criteria under which the U.S. Government should support relocation and resettlement activities are included.
14. Adoption of basic minimum standards for the supply of goods and services is recommended. These standards should serve as the basis for monitoring the overall program.
15. An expansion of voluntary agency services to the DPs is needed. This need can be met by improving the capabilities of some local voluntary agencies, assigning responsibility to voluntary agencies for certain services to the DPs, and by seeking to involve qualified international agencies in the assistance program. Voluntary agencies should be assigned specific tasks but should not be asked to assume overall control of the assistance program.
16. The technical capability of the AID Program Unit should be upgraded as should the capability of many PVOs now providing relief to displaced persons. Resources for training and improving specific technical skills are included in the report.
17. Protection remains a critical issue, particularly for non-registered displaced persons. Whether the threat is real or perceived, there is evidence that displaced persons feel sufficiently intimidated by "the situation" that they hesitate to play leadership roles in the relief effort. Development of indigenous leadership is a principal component of successful relief operations throughout the world. For similar reasons, some private voluntary organizations hesitate to become involved in relief efforts.

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