

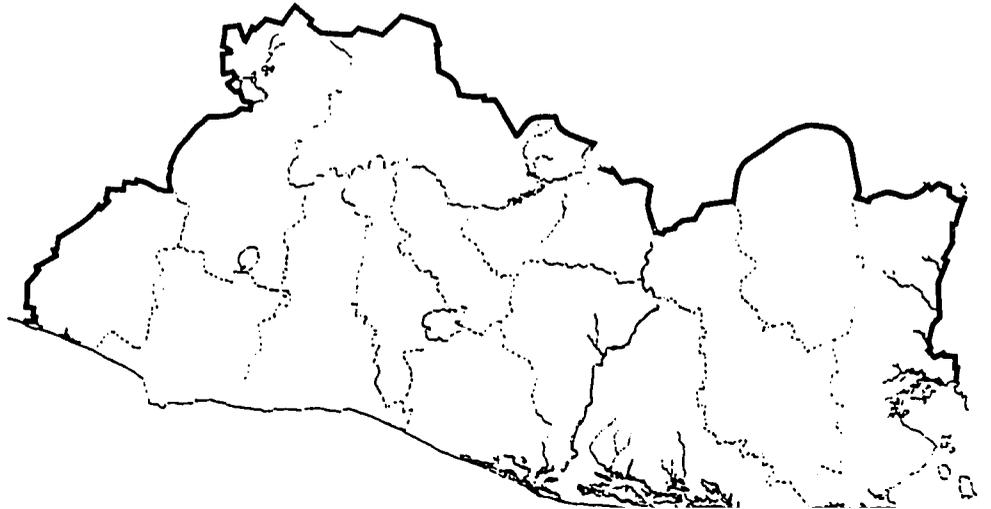
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Central America Regional Transportation Study

El Salvador

June 1987



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Brinckerhoff** 100
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presented by
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E1 SALVADOR

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CENTRAL AMERICAN TRANSPORT

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EXECUTIVE SUMMARY

This report evaluates transportation in El Salvador and recommends ways to reduce limitations on the export of non-traditional products (products other than the traditional coffee, sugar, and meat).

The full study consists of six national reports and one regional report. It was sponsored by the United States Agency for International Development (USAID) through the Regional Office for Central America and Panama (ROCAP) to help USAID missions in the region understand the role of transportation in the export of non-traditional products. Reducing transportational limitations on these exports supports the Caribbean Basin Initiative (CBI) for a healthy regional economy based on greater and more varied exports to the United States and other nations.

Interviews and fact-gathering in El Salvador and in the United States showed that many factors, both physical and institutional, limit the transportation and export of non-traditional products.

Physical Limitations. The network of main roads is sufficiently developed to connect all main population

centers, but lacks well-maintained rural feeder roads and regional collection centers for produce. This isolates producers and increases truckers' costs. Trucking costs also go up when expensive refrigerated containers are left parked as substitutes for refrigerated warehouses.

Institutional Limitations. Limitations in the use of existing facilities, as distinct from limitations in physical facilities, are termed "institutional;" correcting them can benefit exports at no capital cost. Because of the expense and uncertain outcome of legal processes associated with contractual disputes, exporters are reluctant to combine for mutual benefit; because of the shortage of facilities for training mechanics, truck drivers, and trucking managers, land transport is more expensive than it should be; because of a lack of investigation of alternative markets for the products of El Salvador exporters are competing with a handicap with those countries that have ports on the Atlantic. These issues require institutional changes for their correction.

The Basis for Recommendations. The report records numerous suggestions from persons interviewed, as well as programs devised by the study team itself, and should be viewed as a storehouse of possibilities. Prioritized recommendations, however, were made on a very specific basis: appropriateness for short-term actions and appropriateness for implementation on a national level as opposed to a regional level. Actions that might be best left for implementation by groups other than USAID/ROCAP are not omitted from the prioritized recommendations as these may attract the attention of groups other than USAID.

Relative costs and benefits were estimated for each prioritized recommendation and recommendations were ranked within the two categories, physical and institutional. Relative benefits are estimated as the percentage by which each action can increase total exports of non-traditional products.

Institutional Recommendations

1. Contract Law Amendments

Approximate cost: not known

Approximate benefit: \$8 million increased sale minimum per
year

Time frame: study 1988-1990

immediate programs 1990-1995

long-term programs 1990-on

- o Introduce changes to the current system of contract law to enable contracts to be easily entered into and for their disputes to be quickly, cheaply, and consistently resolved.

- o Introduce contracts of carriage to enable a shipper and a carrier to enter into definite and easily enforceable agreements regarding date, quantity, and cost. By allowing carriers to plan for guaranteed volumes and schedules, such contracts would reduce the cost to carriers and hence reduce freight charges to producers.

- o Form exporters' groups to negotiate contracts; determine the best legal structure so that groups can bind their members to the volumes and schedules they have set out in contracts with carriers.
- o Introduce appropriate legislation to encourage the operation of transport brokers.

2. Overseas Representation

Approximate cost: \$300,000 per year

Approximate benefit: \$2 million increased sales

Time frame: open office 1988/1989

- o Place exporters' representatives in Miami to verify the condition of cargo on arrival and seek potential buyers (especially for perishable products).

3. Group Problem-Solving Assistance

Approximate cost: \$300,000 per year

Approximate benefit: up to \$2.0 million increased sales

Time frame: start program 1988

- o Classes in group problem-solving techniques. Graduates of such classes would be a seed group of nationals trained in group problem-solving who could improve the methods and focus of meetings among producers, carriers, and government officials.

4. Removal of Export Taxes

Approximate cost: not known

Approximate benefits: \$23 million annual sales increase

Time frame: 1988 on

5. Education Programs

Approximate costs: \$1 million total annual budget

Approximate benefits: \$1.5 million annual sales increase

Time frame: 1988 on

- o Introduce education programs to help nationals involved in the export of non traditional products to produce, transport, and market these products more effectively.

- Training for truck drivers, including awareness of the special needs of easily damaged products

- Training for mechanics, including ways to verify the effectiveness of truck maintenance programs

- Training for managers of trucking companies, including ways to reduce empty trips.

6. Increase Number of Customs Inspectors at US Ports

Approximate cost: \$600,000 per year

Approximate benefit: \$2.0 million increased sales per year

Time frame: 1987/88

7. National Marketing Organization

Approximate cost: \$960,000

Approximate benefit: \$12 million

Time frame: consultant selection 1988
start program 1989/89

Physical Recommendations

1. Review of Road Repair and Maintenance

Approximate cost: \$300,000 (study only)

Approximate benefit: \$1.5 million increased sales

Time frame: study 1988

implementation & procurement 1989-1994

- o An energetic program of rural road rehabilitation and maintenance to keep roads passable in all weather and to reduce damage to trucks, starting with review of ministerial workshop capability.

2. Container Freight Stations

Approximate cost: \$800,000

Approximate benefit: \$10 million increased sales

Time frame: location, design etc 1988

construction 1989-1992

- o Construct a container freight station in a key location to facilitate the consolidation of cargo for export and the unpacking of containers for distribution.

3. Refrigerated Warehouse

Approximate cost: \$1.4 million

Approximate benefit: \$2.0 million increased sales

Time frame: study 1988-1989

construction 1989-1993

- o Construct a refrigerated warehouse at a strategic location to enable perishable agricultural produce to be stored and packed prior to shipment.

These recommendations result from an in-depth look at problems facing the exporters of non-traditional products and an attempt to rank remedies by their relative costs and benefits. The analysis convinced those preparing this study that the problems of transportation and exports were deep-seated and that quick and simple remedies did not exist. It was also found that while there was a definite need for capital improvements to the transportation infrastructure--investments that could only be justified at the national level of costs and benefits--the low total volume associated with non-traditional exports resulted in little justification for major capital projects. Furthermore, the study team concluded that priority should be given to the major institutional recommendations, in the expectation that these would create the best environment for more effective use of the existing infrastructure.

EL SALVADOR

CHAPTER 1

INTRODUCTION TO THE STUDY

SYNOPSIS

Parsons Brinckerhoff International, Inc., was commissioned by USAID, as part of Contract No. OTR-0000-I-00-6071-00, to supply technical services in Central America in the form of a study for the Central America Regional Transport Project. The objective of the study was to produce a series of reports that would enable the Regional Office for Central America and the Caribbean (ROCAP) and the USAID missions to understand more fully the role of transportation in the development and promotion of extra-regional and intra-regional trade in non-traditional exports, and to assist in the formulation of proposals for the removal of the identified transportation-related problems. Recent experiences in the region have concluded that initiatives by ROCAP and the Central American bilateral USAIDs in support of non-traditional exports have invariably encountered transportation-related problems which have dampened the anticipated impact of the programs.

To complete the contract requirements, a study team was proposed which, for the six countries given (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Panama), was to identify land, sea and air transportation constraints inhibiting private sector

exports of Caribbean Basin Initiative and Central American Initiative non-traditional products in both intra and inter-regional markets, and to recommend means for removing these constraints. For the recommended means, order of magnitude costs and time frames were to be developed.

A non-traditional export was to be considered any product other than the traditional export products of (in the case of El Salvador) coffee, sugar, beef, and cotton.

A constraint was to be considered any condition which served to lessen service quality, increase transport costs, or reduce producer incentives to generate non-traditional products.

The results of the study were to be contained in seven reports: one for each of the countries and one covering the region as a whole.

The study was conducted in three phases:

Phase I - US review of documentation, consultations and survey methodology development

Phase II - Field interviews, documentation research and survey research

Phase III - Analysis of needs and prioritization of recommendations.

A study team of one transportation economist and two transportation engineers provided services both in the USA and in Central America, while a third transport engineer provided

additional services solely in the USA. A total of 21 weeks was allowed from the start of the contract to the submission of the draft final report to ROCAP. Work started on the project in the USA on Monday, September 29, 1986.

This report, then, presents the results of the study for one of the subject countries: El Salvador. It contains a detailed review of the economic, institutional, physical and operational aspect of the country and its transportation system, and the effects that all these have on the exports of non-traditional products. The report identifies problems that are having an inhibiting effect on the export of the non-traditional products, and makes recommendations for their removal or amelioration. The report makes a particular effort to present the views of the exporters themselves regarding transportation, and discusses the accuracies and possible misconceptions contained in these views.

BACKGROUND

Legislators, policy formulators and administrators, and responsible observers--in both the public and private sectors--in both the United States and Central America have recognized that the recent economic decline in the region of Central America has deep roots, and that the resulting political, economic and financial disequilibrium is not likely to be self-correcting. A major surge in the primary commodity price levels so critical to current economic health of the region is not a near term

probability. Indeed, the December 1986 decision by the United States to reduce its sugar imports from Latin America and the Caribbean by 41% in 1987 will put downward pressure on world sugar prices. A comparable decision on meat imports from the region will also have a destabilizing impact on world prices.

Regional protectionism appears to be on the rise with the obvious negative impact on trade between the individual Central American nations. Political tensions--and the widespread, often exaggerated, perception of these tensions--serve to limit investor confidence in the countries of the region and restrain critical capital inflows.

This critical--and potentially worsening--situation has given rise to the political and legislative background for planned US AID regional and bilateral programs in Central America: the 1984 enactment of the Caribbean Basin Initiative (CBI) and the follow up Central American Initiative (CAI).

The CBI and CAI programs are designed to stimulate investment and trade in the several Central American nations. The arch of the CBI and CAI programs is easier access to the US market. In order to add to the concrete value of this improved access, an increased program of foreign economic assistance is being undertaken by ROCAP and the Central American bilateral USAIDs.

An important focus of the proposed interventions is on assistance to exporters of products that are "non-traditional" to the countries of the region. The "traditional" exports are the major commodities, such as bananas, coffee, cotton, sugar and meat, while the "non-traditional" are all the other items of export that can compete in world markets.

Previous interventions by the Regional Office for Central America and Panama and bilateral USAIDs have encountered serious obstacles that have been identified as being transportation-related. In an effort to investigate the validity and dimensions of the impediment, this study was commissioned.

The study sought to achieve its objectives by:

- o A review of sea, air and land transportation and its related distribution documentation, including economic trends, cargo volumes, and other Central American transportation studies.
- o Consultation with institutions, organizations, companies and individuals in the USA that are or have been involved with the export of non-traditional products in the region.
- o Interviews in each of the identified countries with individuals and groups such as

Growers and exporters of non-traditional perishable agricultural products;

Exporters of other non-traditional export products;

Importers of inputs to the non-traditional sector;

Chambers of Commerce, industry and manufacturing;

USAID private sector officers and rural development officers;

Government ministers with responsibilities related to the transport of non-traditional commodities;

Export promotion councils;

Shippers' councils;

Airlines, ocean shipping companies, truckers, and ports and airports; and

Shipping agents, freight forwarders, customs brokers, and customs officials.

- o Identification of institutional and structural constraints affecting the operating efficiency and cost of roads and road transport, railways, aviation, and ports and maritime transport.

- o Analysis and formulation of prioritized interventions which should be undertaken to improve the quality of transport service and reduce its cost, as related to the movement of non-traditional products to market.

OUTLINE METHODOLOGY

The approach adopted started with an analysis to derive a definitive list of non-traditional exports for each country. For this purpose, published trade statistics, such as those contained in the UN Yearbook of International Trade, were analyzed and abstracted.

Dividing work between the United States and Central America, the team recognized from the start that the transportation-related constraints on Central American exports may not be located in those countries themselves, but in the United States. The transportation chain from producer to market was seen as a long one, and solving a problem observed at one point in the chain may ultimately depend on solving other problems far down the chain, perhaps in another country. The choice of the US importing port, for example, could affect transportation cost and efficiency as much as the choice of the exporting port in the country of origin. Thus time was spent in the early stages of the study interviewing US-based exporters, shipping company representatives, trade groups, international agencies, local embassy officials, and representatives of the major ports serving Central America.

The approach that was actually used in the field by the study team in this case was a studied compromise. While interviews with users, shippers, carriers, and agencies were being conducted in the USA, the export figures of the countries were studied to arrive at a definitive list of traditional and non-traditional exports. The information collected in the USA was used to develop a first cut at a list of names of individuals and organizations in each of the target countries who would have to be interviewed to obtain greater details on the nature of the products and the nature of the constraints. Interviews in Central America sought to obtain an idea of the potential for the export product to grow, a measure of the relationship between the price of the product on the open market and the cost of remedial transportation-related work, and an idea of what products could be aggregated to benefit from the same improvements. Before formulating any recommendations for improvements or amendments,

officials of national governments and international agencies were questioned, where appropriate, to ensure that no plans were being formulated by others that would pre-empt or otherwise override any proposals contained in the reports of this study. Hence, the final reports contain prioritized lists of recommendations whose implementation could significantly increase the volume of non-traditional exports. Modifications or improvements that would be better introduced on a regional basis, rather than country-by-country, are included in the regional report.

In addition to interviews, the study team used available documents, such as relevant studies, Central Bank reviews, ministry papers, USAID memoranda, and newspaper and magazine articles. On-the-spot investigations were made as needed. Thus major ports and airports were inspected, particularly since their efficiency would affect several industries at once. In many cases producers of similar export items had similar constraints, and the flexible interviewing schedule allowed the team to pursue such common concerns through directed questioning and on-the-spot inspections.

The results of the studies were written up in the USA under the following headings:

- o geography, population and demographics
- o the export of non-traditional products
- o national transportation
- o conclusions and recommendations
- o national economy and trade

The analysis of each nation's non-traditional exports was done within the classification framework of the internationally-accepted Standard International Trade Classification (SITC), Revision 3. The adoption of this system was considered fundamental to the study, giving it a consistent and systematic framework within which to analyze the information collected regarding the wide range of non-traditional products.

The studies were produced in the form of seven separate reports: one each for Belize, Guatemala, Honduras, El Salvador, Costa Rica, and Panama, and one report covering the region as a whole.

Metrication

The metric system of weights and measures has been adopted throughout this report, retaining pounds and feet only where their use is an industry standard (e.g. 20 foot containers). In the case of tons, the use of "metric tons" has been avoided in preference for the simpler "tons." Thus tons should always be assumed to be 1,000 kg.

EL SALVADOR

CHAPTER 2

GENERAL

GEOGRAPHY

El Salvador has a land area of 21,041 square kilometers. It is rectangular in shape, being 300 km long and 100 km wide. The country has a frontier on the east and the north with Honduras. It is bordered by Guatemala on the northwest, and shares the Gulf of Fonseca with Honduras in the southeast. The coastal strip is narrow; most of the country consists of upland plains and hills. Agriculture is concentrated in the numerous river valleys which drain into the Pacific.

Coastal areas are tropical with high humidity and temperature. Inland, the temperature is moderated by altitude. San Salvador, the capital, at an altitude of 682 meters has a daily temperature range of 19°C to 33°C in May and one of 16°C to 32°C in December.

Rainfall in the capital ranges from a low in February of 5 mm to a high of 328 mm in June. The wet season runs from May to October.



El Salvador
Provinces

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POPULATION AND DEMOGRAPHICS

The population of El Salvador was estimated to be almost 5 million, as of 1985. With almost 240 persons per square kilometer, El Salvador is the most densely populated country on the American continent. From 1980 to 1985, El Salvador's population grew at an average annual rate of 1.05 percent, down from an increase of 2.07 percent between 1979 and 1980. About 89% of the population are mestizo, 10% Indian and 1% of European origin. Adult literacy is estimated to be 65%.

The capital, San Salvador, has a population of almost 950,000. The next largest cities are Santa Ana and San Miguel. Until recently some two thirds of the population lived in rural areas. Political tensions, lack of security in rural areas and rising unemployment has brought more people into urban areas. It is estimated that some 42 percent of the population now lives in an urban environment. The destruction of dwellings in the urban areas caused by the 1986 earthquake has created a social crisis of major proportions.

GEOGRAPHIC FACTORS PARTICULARLY AFFECTING TRANSPORTATION

El Salvador is the only Central American country without a coastline on the Caribbean. The transportation implications of this geographical distinction is that El Salvador must rely on the Atlantic ports of its neighbors, or use the Panama Canal, when it ships products destined for the eastern portion of the United States or for Europe. The principal Atlantic outlet for Salvadoran exports is the Guatemalan port of Santo Tomás de Castilla. Some cargo is also routed via Puerto Cortés in Honduras.

The relatively high rainfall and the mountainous landscape make the country an expensive place in which to construct and maintain roads. In comparative terms, however, El Salvador does not have to come to terms with the immense altitudes of its neighbors, and the flow of exports from the main areas of production to the port takes place at fairly modest elevations. The disadvantage lies in the fact that, in using the Atlantic ports of Guatemala and Honduras, the exports of El Salvador have to be trucked through the high mountain passes of the Central American Cordillera. In exporting in this way El Salvador loses some of its comparative, or competitive, advantage.

The Pacific coast of Central America has a history of major earthquakes. The latest, in 1986, devastated much of the city of San Salvador and broke many transportation arteries, leaving major road and rail rehabilitation works to be carried out.

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CHAPTER 3

THE EXPORT OF NON-TRADITIONAL PRODUCTS

EXPORT OVERVIEW

El Salvador counts coffee as its major export, by far. Since 1980, this single commodity has accounted for between 58% and 67% of the total value of exports, with the percentage increasing over recent years.

At the end of the 1980's, cotton was the second most important export item. At 217 million colones in 1980, this product represented 8% of total exports, though still considerably behind the 1,560 million colones which was accounted for by coffee.

In the face of considerable foreign competition, cotton faded from the export lists of El Salvador, and in 1985 accounted for 4.5% of total exports, leaving coffee to support the national economy. The fading fortunes of coffee, however, failed to provide any basis for growth, as a result of which the value of exports has fallen considerably since 1981, as shown in Table 3.1.

Table 3.1
El Salvador
Exports 1981-1985
(millions of colones)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Total Exports	1,992	1,749	1,895	1,793	1,697
Coffee, Value	1,145	1,014	1,107	1,107	1,131
Coffee, Percent	57.5	58.0	58.4	61.7	66.7
Cotton, Value	38	116	141	26	77
Cotton, Percent	6.9	6.6	7.3	1.4	4.5

Exchange: US\$1 = c/2.5 (official rate)

Source: Banco Central de Reserva de El Salvador

The future for the exports of El Salvador, in the face of the projected further decreases in the price of coffee through 1987, looks bleak. Attempts to add cane sugar to the list of exports with some success in recent years, would seem to have been wasted as a result of the massive quota cuts instituted by the USA for 1987.

Main Trading Partners

El Salvador's main trading area, by far, is North America. As shown in Table 3.2, this area alone accounted for 44% of the country's imports in 1985, and 50% of the exports.

Following North America in importance, though at a considerable distance, was Europe. This continent accounted for 12% of El Salvador's imports and 26% of her exports. Of all the areas, only Europe maintained a positive export balance, exports to all other areas being less than the value of imports.

Tables 3.3 and 3.4 show that the imports and exports to each region are dominated by one country, and mainly dominated by one import or export item. As the buyer of more than half of El

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Salvador's main export item - coffee - the United States is El Salvador's main trading partner in North America. As the country's second largest buyer of coffee, West Germany is El Salvador's main export partner in Europe. Japan, similarly, receives considerable amounts of coffee, and so dominates the Asian partners.

Table 3.2
El Salvador
Main Trading Areas
1985
(Millions of Colones)

<u>Area</u>	<u>Imports</u>		<u>Exports</u>	
	<u>Value</u>	<u>% Age</u>	<u>Value</u>	<u>% Age</u>
Total	2,403	100	1,697	100
North America	1,061	44	849	50
Central America & Caribbean	83	3	49	3
South America	67	3	10	1
Asia	163	7	91	5
Africa	541	23	0	0
Europe	290	12	439	26
Oceania	68	3	45	3
Others	33	1	20	1

Table 3.3
El Salvador
Main Trading Partners
Exports 1985
(Millions of Colones)

	<u>Value</u>	<u>% Age</u>
Total Export Value	1,697	100
To USA	811	48
To West Germany	356	21
To Guatemala	153	9
To Japan	86	5
To Costa Rica	62	4
To Spain	38	2
To Panama	37	2
To Canada	37	2
To Belgium/Luxemburg	29	2

Source: Banco Central de Reserva de El Salvador

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Table 3.4
 El Salvador
 Main Trading Partners
 Imports 1985
 (Millions of Colones)

	<u>Value</u>	<u>% Age</u>
Total Import Value	2,403	100
From USA	813	34
From Guatemala	374	16
From Mexico	224	9
From Venezuela	182	8
From Costa Rica	135	6
From Japan	124	5
From West Germany	105	4

Source: Banco Central de Reserva de El Salvador

TRADITIONAL EXPORTS

For the purposes of the study, it was intended that the classification "traditional exports" signify rather more than just those items that had traditionally been exported. The classification was intended to separate those exports that had reached a level of sophistication and volume which enabled them to be managed with economic efficiency from those exports which were small in volume and were uncoordinated. The rationale behind the definition was that exports defined as being traditional in this sense could be expected to be making use of transportation in as efficient a manner as possible, as a result of their great volumes and international management expertise. On the other hand, exporters of what are defined as non-traditional products might be expected to be experiencing correctable difficulties in their use of transportation facilities.

Table 3.5 lists the major export items, together with the value of each in 1985 in thousands of US dollars. Unit values in US dollar per ton are also shown. The significance of these figures is more fully explained in Chapter 4. At this stage, unit values can be said to give an indication of sensitivity to transport cost: the higher the unit value the less the sensitivity.

Table 3.5
El Salvador
Main Export Products
1985

<u>Product</u>	<u>Value</u> Thousand Colones	<u>Volume</u> Tons	<u>Value</u> US\$ Thousands	<u>Unit Value</u> US\$/Ton
Beef	4,353	843	1,741	2,068
Shrimps, Refrig.	22,999	2,392	9,200	3,846
Flour of Fruits & Veg.	3,933	1,071	1,573	1,469
Cane Sugar	73,167	111,883	29,267	262
Coffee, "Pergamino"	8,640	1,046	3,456	3,304
Coffee, "Oro"	747,586	127,165	299,034	2,352
Coffee Extracts	19,746	2,357	7,898	3,351
Sesame Seeds	17,477	9,038	6,991	774
Cotton Waste	4,161	4,295	1,664	387
Cotton	63,610	20,812	24,444	1,223
Gasoline, Diesel	11,290	31,309	4,516	144
Other Oil Products	13,510	17,578	5,404	307
Medicines	15,473	527	6,189	11,744
Soaps	3,415	2,039	1,366	670
Insecticides	9,727	1,244	3,891	3,128
Cardboard Boxes	15,841	6,537	6,336	969
Toilet Paper	4,649	1,438	1,860	1,293
Cotton Thread	7,950	1,388	3,180	2,291
Bleached Thread	5,692	1,022	2,278	2,229
Cotton Cloth	3,370	177	1,348	7,616
Cotton Cloth	3,267	188	1,307	6,952
Towels, Towelling	13,411	856	5,364	6,266
Aluminum Sheets	11,018	764	4,407	5,768
Elec Cable	6,731	1,074	2,692	2,507
Leather Shoes	6,925	664	2,770	4,172

Source: Banco Central de Reserva de El Salvador

Table 3.6
El Salvador
Traditional Exports
1982-1985
Value, Thousand Colones

<u>Product</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Meat	6,501	8,936	7,219	4,353
Unrefined Sugar	39,712	100,230	64,688	57,931
Coffee, All Types	1,014,183	1,107,044	1,106,947	1,131,383
Cotton Waste	2,838	2,182	3,056	4,161
Cotton	110,647	144,121	20,972	63,610
Petroleum Products	<u>30,161</u>	<u>30,896</u>	<u>38,398</u>	<u>33,827</u>
Total	1,204,042	1,393,409	1,241,280	1,295,265
US\$ Equivalent	481,617	557,364	496,512	518,106

Source: Ministerio De Comercio Exterior "Estadísticas De Comercio Exterior De El Salvador, 1986", Banco Central De Reserva De El Salvador

A look at the history of the top groups of exports since 1982 (Table 3.6) demonstrates clearly that coffee, cotton, sugar, and meat have become the "traditional" exports of El Salvador, enjoying all the advantages of potential economic efficiency.

To round out the list of traditional exports, the category of "petroleum products" was added. Although petroleum contributes at the moment only a small part of the export total, it shares with coffee and cotton the property of being a traded commodity, and as such is subject to international forces that are outside the control of the Salvadoran producer. While meat is not strictly a commodity in the same sense, when trading with the USA it is subject to quotas and pricing forces that are not dissimilar to those that affect coffee and sugar. As shown by recent cuts by the USA in import quotas for both sugar and meat, trade in such commodities can have devastating consequences for a small country.

NON-TRADITIONAL EXPORTS

Export Profile

In this study, then, non-traditional products are all the exports that remain once the traditional exports have been removed. Clearly, these run into several hundred different traded items, and so aggregation was necessary to facilitate the interviewing and subsequent analysis.

Treatment on an aggregated basis was also necessary because individual export items did not appear in the national statistics every year. Factors combined differently each year to make export products either profitable or not: exporters would be active in years of economic returns, and inactive in years where their products were not competitive overseas. For most exporters of non-traditional products, there was little attempt at planning and putting into effect a program for increasing exports, it being considered that the future was far too uncertain for them to make such a commitment.

The system of aggregation used was the Standard International Trade Classification (SITC), as published by the United Nations. The system is well-accepted internationally for reporting trade figures, and forms a logical basis for the analysis of groups of traded commodities. The method behind the classification involves a numbering system that specifies the product with greater accuracy with each additional number. There are ten broad groups of products at the one-digit level (numbers 0 to 9), with the lower range applying to the more agricultural products, and the higher range signifying greater industrialization.

The export profile for El Salvador in 1985 using the SITC system is shown in Table 3.7. The ten SITC codes are given on the left and the US dollar value and total tonnage for each is given on the right. It is clear from the table that the overwhelming part of El Salvador's exports are in the category "0 - Food & Live Animals", being 75% of the dollar value and 63% of the total tonnage.

As a broad guide to relative industrialization and development, categories 0,1,2,3 and 4 are compared with categories 5,6,7,8 and 9. In the case of El Salvador, manufactured goods account for only 17% of all exports by value. The remaining 83% derives from the land, in one form or another, either by growing, mining, or drilling.

Table 3.8 shows the SITC export profile broken down into the traditional and non-traditional groupings. The column on the far right shows the value of exports in each group once the values of the traditional exports have been removed.

Of the 22% of the exports that non-traditional, 43% fall into the non-manufactured category. Thus, in general terms, of the non-traditional exports of El Salvador, about half involve some degree of manufacturing. While it was generally believed at the time of the study that non-traditional exports were predominantly agricultural, the analysis shows that the perception was not entirely accurate. A significant contribution was being made by pharmaceuticals, textiles, and light manufacturing.

Table 3.7
El Salvador
Export Profile by SITC Category
1985

<u>SITC Code</u>	<u>Description</u>	<u>Value</u> <u>US\$</u> <u>Millions</u>	<u>Volume</u> <u>Tons</u>
	Food & Live		
0	Animals	506	312,356
1	Drink & Tobacco	-	-
2	Crude Materials	41	48,006
3	Mineral Fuels	14	71,336
4	Veg. Etc. Oils	3	2,899
5	Chemicals	35	18,010
6	Basic Manuf.	60	35,204
7	Transp. Equip.	-	-
8	Other Mannf.	13	4,613
9	Others*	7	2,922
	Total	<u>\$679</u>	<u>495,346</u>

*Included Drink & Tobacco, Transport Equipment, & Other small items.

Source: Ministerio de Comercio Exterior

Table 3.8
El Salvador
Non-Traditional Export Profile
1985

<u>Site Code</u>	<u>Description</u>	Value US\$ Millions		
		<u>Total</u>	<u>Tradi- tional</u>	<u>Non-Tra- ditional</u>
0	Food Etc.	506	476	30
1	Drinks & Tobacco	-	-	-
2	Crude Materials	41	31	10
3	Mineral Fuels	14	14	-
4	Animal/Veg. Oils	3	-	3
5	Chemicals	35	-	35
6	Basic Manuf.	60	-	60
7	Transp. Equip.	-	-	-
8	Other Manuf.	13	-	13
9	Others	7	-	7
	Total	679	521	158
	Percentage	100%	77%	22%

*Includes Drink & Tobacco, Transport Equipment, & other small items.

Source: Ministerio de Comercio Exterior

Survey Findings

The survey findings are now discussed in the following manner: each category is identified with an indication of its importance in the export spectrum; the transport sensitivity of the export is indicated; finally, the findings of the survey are presented along with an evaluation of the information generated in the surveys.

Fruits and Vegetables. This category consists primarily of melon exports. Other products include broccoli, cauliflower, cucumbers and snow peas. Annual volume of exports is less than 5,000 metric tons. Because of the low value per ton and the need for specialized transport facilities such as refrigerated containers exports of fruit and vegetables are sensitive to transport cost.

The survey of this industry indicated that, since major markets are in the Miami area, a Caribbean port of exit is advantageous. Puerto Cortés in Honduras is expensive to reach because of bad roads and mountainous terrain. Access to Puerto Cortés through Guatemala is technically feasible but the added costs of two border crossings makes such a routing financially unattractive. Therefore, the 400 km journey to Santo Tomás de Castilla in Guatemala is the least costly and favored option.

Exporters claim that refrigerated containers are not always available as needed. In any event, they say, tariffs for sea freight or for door to door movements are high, estimated at \$3,400 door to port for a 40 foot refrigerated container. At Pacific ports in the region, principally Acajutla, frequency of service is inferior to that available on the Caribbean. This impedes a marketing campaign to increase penetration of the California market.

Melon growers believe they are being taken advantage of by brokers and importers in the US. The principal complaint is that brokers do not always pay the full, agreed-upon price.

Some industry people expressed interest in chartering planes in the high season to export products. However, no venture of this type has been undertaken to date.

It is inevitable that transport costs will be high for small producers who require specialized facilities, who have almost no southbound cargo flows and who must use bad roads to reach a port in a neighboring country.

As a result, the exporters face many problems. Their financial resources are limited and, consequently, their promotional efforts and transport negotiating posture is weak. Since products are seasonal, inability to forecast their output with acceptable levels of accuracy inevitably leads to a demand-supply imbalance for refrigerated containers. Further, since there are no refrigerated holding areas in production centers to remove field heat, exporters use the containers for this purpose. This tends to reduce the number of reefers available for transport. Containers are often misused and damaged, further reducing the supply of these refrigerated boxes.

This demand supply imbalance aggravates an already costly transport situation. Since scant cargo requires reefers in a southbound direction, it is expensive to make these facilities available for imprecisely known peak northbound flows.

It should be noted that the problems facing Salvadoran melon exporters are not unique. Melon growing tends to be a relatively small scale activity that requires costly and specialized transport equipment on a seasonal basis. What is special about the situation in El Salvador is that exporters have to truck their wares 400 km to a port in a neighboring country.

Using air freight for the export of fresh fruits and vegetables from El Salvador is entirely feasible: the nation is served by many appropriate airlines, and the International Airport has all the needed facilities. However, the cost of this mode mandates that only high quality and high price produce can be considered. As a general rule-of-thumb, the unit fob price of a product has to exceed \$1,000 per ton for air transport to be even considered. At \$550 per ton, melons would clearly not be candidates.

Shellfish, Fresh and Frozen. Shellfish exports have varied between 2,500 and 3,700 metric tons in recent years. The principal product is shrimp. The high value per ton of this product makes shipments relatively insensitive to transport cost. A variety of problems were identified in the survey of shellfish producers. Political instability makes it difficult to bring products from El Triunfo to San Salvador, from whence they are transported to Santo Tomás de Castilla in Guatemala for shipment to Miami. Producers also expressed a belief that costs for road transport and sea freight are unduly high. Some shrimp, however, are exported by air. Industry sources claim that another major impediment is the destabilizing impact of a government policy of taxing rather than subsidising exports. For example, the tax on every pound exported is US\$ 0.20 plus a municipality levy of US \$ 0.02 per pound.

It is clear that the modest scale of export operations limits management's ability to negotiate more favorable transport rates.

The location of the primary consuming market in Miami is a fundamental and enduring problem. The combination of road and port charges makes Santo Tomás the exit port of choice. But the roads to the Guatemalan port need substantial upgrading and Santo Tomás, too, has many inefficiencies. Therefore, Salvadoran exporters are limited in the extent to which they can reduce transport costs. Road and port improvements in Guatemala are simply not subject to their control.

Even making Puerto Cortés the more attractive exit point is beyond their control. Road and port improvements in Honduras require decision in Tegucigalpa and not San Salvador.

The relative stability of demand and world price for shrimp has created an interest in the use of this item for barter. A Belgian firm, for example, is reported to be negotiating deliveries of shrimp in return for the installation of a geothermal plant.

Paper and Paperboard. This is an established industry which brings in raw materials from the United States and markets finished products to the other nations of the region. Annual exports were some 20,000 metric tons in 1982 and fell to half that level in 1985. Based on a value of nearly \$1,600 per ton, paper products have some sensitivity to transport cost.

Since exports move by road throughout the region, the major bars to expanding exports are bad roads--such as the road through northern Guatemala and Belize to Belize City--and trucking regulations which bar foreign registered vehicles from the national territory, as was recently passed in Belize.

Another possible, future impediment is the growth of the paper industry in Guatemala. At this point Salvadoran exporters still have a cost advantage.

Salvadoran paper products have an excellent reputation throughout the region. El Salvador is a small nation and its own road network is adequate. Therefore, lower transport costs for Salvadoran paper exports requires developments within other countries as well as progress towards more regional cooperation.

Flour of Fruit and Vegetables. These products, used primarily as animal feed, are exported at a rate of about 2,000 metric tons a year. All products are marketed in Central America and the industry has average sensitivity to transport costs with commodity value of nearly \$1,700 per ton.

The survey of flour producers revealed again that exporters would like to see a better road system throughout Central America. Simpler and more expeditious border crossings were also desired.

As with other Salvadoran products exported to the region, the ability of local exporters to reduce transport costs is limited. They alone cannot improve the road network in other nations nor can they stem the protectionism that is impeding inter-regional product flows.

Cotton Yarn, Bleached, Dyed. This sector of the textile industry has made important strides in recent years. Annual exports are now in excess of 25,000 tons. Major markets are in the US, Japan and West Germany. This is an industry of low transport sensitivity, with products averaging a value of over \$2,600 per metric ton.

Textile exporters noted that shipments to the US and Europe are routed via Santo Tomás de Castilla in Guatemala. The length and cost of the road haul was burdensome. Frequency of shipping service to Europe was also considered less than satisfactory. While the exports were not perishable it was costly to miss a sailing. Under such circumstances products have to be stored for 10 days to two weeks until the next scheduled departure.

Shipments to Japan embark from Acajutla. Again, the frequency of service was a problem. However, the shorter journey to the national port meant that fewer sailings were missed. Compared to transport costs to Japan, most exporters complained that rates to Miami or Europe were disproportionately expensive.

The problems involved in using a relatively distant port cannot easily be eliminated. Actions by other governments are necessary if the quality and cost of the transport service to a neighboring port is to be reduced.

Rates to Japan by sea are reasonable, since this is the norm for long distance transport by sea, and Far Eastern vessels tend to be larger than those serving the US and Europe. Attracting more scheduled sailings from Acajutla may not be easily accomplished. Cargo volumes are modest and there is direct competition with Puerto Quetzal in Guatemala.

Insulated Wire, Cable. Exports of wire and cable products have remained under 2,000 metric tons for each of the last five years. All exports go to the other nations of the region, with the exception of Panama. Wire and cable exports have a relatively high value of nearly \$2,900 per ton, suggesting lower sensitivity to transport cost than other items.

The exporters said bad roads and tedious and lengthy border crossings were the main problems. Again, Salvadoran exporters acting alone can have but limited influence when it comes to lowering transport costs. Meaningful reductions in the costs facing these exporters require actions by other nations and a growing spirit of regional cooperation.

GENERAL BUSINESS CLIMATE

The general view on the business climate in El Salvador was that it was fairly healthy. Clearly, a major rebuilding of the country was going to be required after the earthquake, and this was not being helped by the current spate of political instabilities. Other than coffee, for which the country was famous, exports had always been at a low level and depended greatly on the markets of Central America. Most people felt that continued effort was going to be required before all the problems could be resolved, and that the government was going to have to establish some clear directions for the exporting business community. Many expressed the opinion that Salvadoran businesses

were going to need much more representation abroad, both for promotion of goods and services and for protection of the exporter, if export potentials were going to be met. Much of what was needed within the country was once in place, but recent events had led to a rapid deterioration of a great deal of valuable exporting infrastructure.

It was felt that much-needed foreign interest could be obtained if investment and export incentives were improved, and if more active assistance could be offered in dealing with the problems of setting up a business venture and of exporting. While the tax-free holiday for investors was a worthwhile inducement, it was considered that the type of inducement that was lacking was of the purely practical type. Some of those interviewed questioned the seriousness of the government when it came to the export question.

Many representatives of business interests were concerned that small businesses were proliferating in the absence of any plan. Most felt that for exporting purposes the firm had to have a substantial volume to offer the potential client, and that the size of operation that was officially being encouraged would be incapable of effective competition in overseas markets. There was little enough in the field of serious marketing studies, mostly as a result of shortage of financing, but small operations would without a doubt not have the financial resources required for this type of investigation. They noted that many organizations had been set up in El Salvador to assist the producer and the exporter, but that most of these became opportunities for

"empire-building." The practical help that was needed regarding markets, production standards, potential clients' location, external fund sources, exporting techniques, and short cuts, all these were just not available from these institutions. Rather than represent their clients, it was perceived that some groups were more adept at promoting themselves.

On the whole, however, the opinion was expressed that El Salvador was not a particularly difficult place in which to do business. The paperwork was not onerous, and certainly did not hold up shipments. Established exporters had experienced staff who knew how to expedite the export and import procedures, and no-one claimed that export shipments had been turned back because of incorrect documentation (as was a common complaint in other countries of Central America). It was possible for established exporters to clear up minor errors in documentation after departure of the consignment.

It was felt that the people of El Salvador were an industrious group, and that given the opportunity, they could become as prosperous as any other the region. Of immediate concern was the almost total absence of foreign exchange, which was threatening to create a shortage in the availability of raw materials for many industries.

EL SALVADOR

CHAPTER 4

NATIONAL TRANSPORTATION

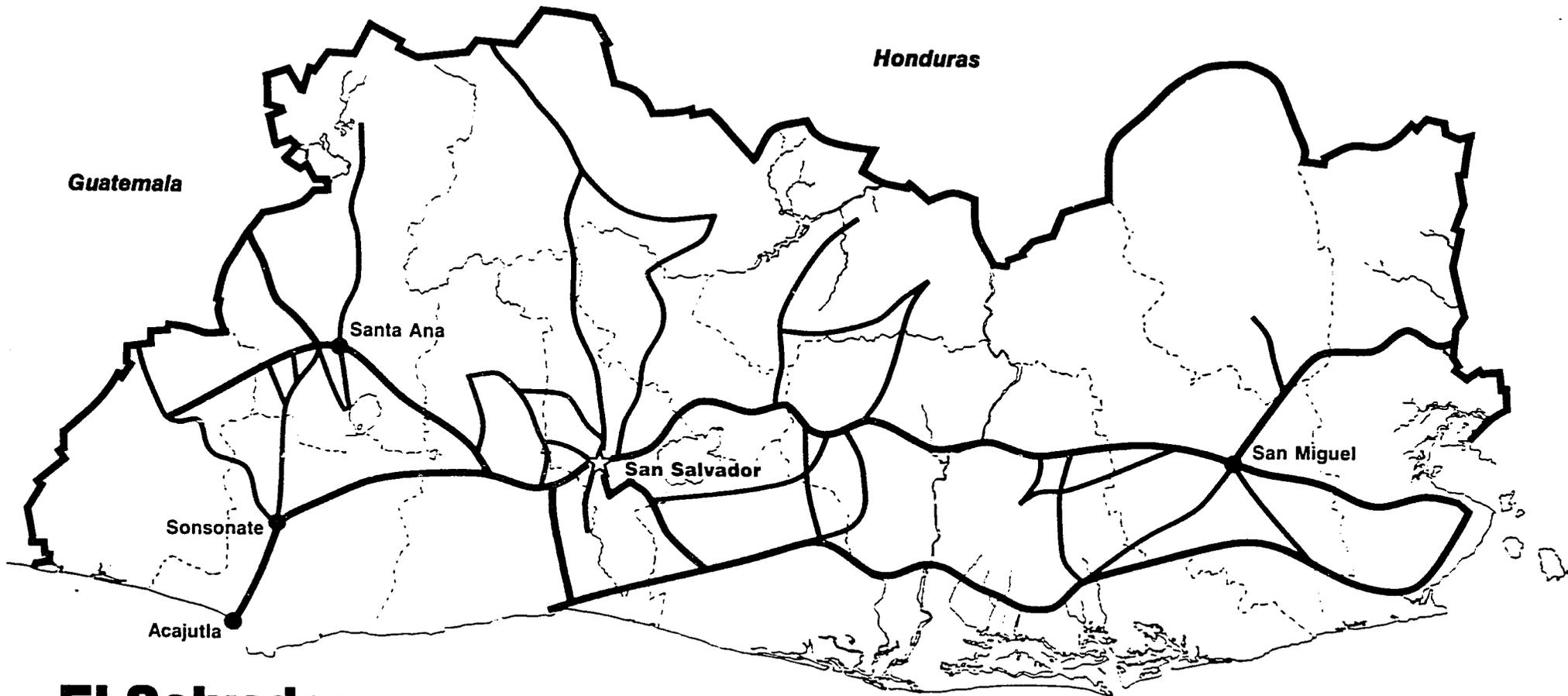
El Salvador is served by road, railroad, water and air transport. As has been noted previously, El Salvador is the only country in the region which lacks a port on the Caribbean.

The Comision Ejecutiva Portuaria Autonoma (CEPA) is a public service institution charged with managing the two Pacific ports, the national railroad, Ferrocarriles Nacionales de El Salvador (FENADESAL), and the San Salvador International Airport. CEPA reports to the executive branch of the government through the Ministry of Economy.

ROAD TRANSPORTATION

El Salvador has about 12,500 km of roads, of which half are all weather. There are various design standards for the elements in the national road system. The highest geometric standards apply to Special Roads, constituting slightly more than 1 percent of the national road network.

Primary roads are also built to international standards and are intended to accommodate an average daily traffic (ADT) up to 2,000 vehicles. They make up 6 percent of the national network.



El Salvador

Highways

Secondary roads have somewhat lower design standards and are meant to handle an average daily traffic of 500 to 2,000 vehicles. They constitute about 11 percent of the national road total. Tertiary Roads are intended to handle an average daily traffic of 100 to 500 vehicles and make up about 17 percent of the network. Farther down the design standards ladder are Rural Roads with a traffic handling capacity of about 100 vehicles per day and Neighborhood Roads which--together--make up two thirds of the national network.

The most important roads in El Salvador are:

- o The toll road from San Salvador to Comalapa Airport is a Special Road. The link is about 36 km in length and connects the metropolitan area of San Salvador with the airport. It is a limited access road with only five points of entry. This road in the special road category is designed to accomodate 28,000 to 32,000 vehicles per day.
- o Another Special Road is the toll highway Comalapa--Zacatecoluca. When construction is complete--including an interchange for traffic going to and from La Herradura and Costa del Sol--the ADT is expected to be between 28,000 and 32,000 vehicles.
- o Highway CA-2, Comalapa--La Libertad. This 24 km road serves touristic, agricultural and commercial functions. The road handles from 4,000 to 6,000 vehicles per day.
- o Comalapa--El Rosario--Zacatecoluca. This is the alternative to the toll road between Comalapa and Zacatecoluca. The road accomodates from 4,000 to 6,000 vehicles per day.

The proposed road maintenance plan for 1987 has been worked out in considerable detail. The maintenance requirements for 1987 were scheduled to exceed 64 million colones. Maintenance activities were to be performed on about 9,500 kilometers of road. Almost 65 percent of the maintenance work was to be performed on rural roads.

The road network of El Salvador demonstrates a clear distinction between what is desired and what is possible: a considerable amount of new construction took place in the late 70's and early 80's, and some excellent highways exist, but they are now considerably damaged by the earthquake of 1986, and quite often are not located where they are most needed.

The responsibility for road construction and maintenance is in the hands of the Ministerio de Obras Publicas, with headquarters in San Salvador. This ministry has worked out a general program for road new construction, and has implemented those sections that have proved necessary, feasible, and for which funds were available. In general, priority has been given to:

1. improving access to areas of greatest agricultural potential.
2. maintaining access to neighboring countries.
3. developing access to the relatively new port at Acajutla.

In calculating the potential benefit of a proposed highway program, it had been possible previously to take into account the capacity of the railroad system. By the mid-80's, however, the railroad system's contribution was much diminished, resulting in a greater amount of traffic on the nation's highway system. Unfortunately, at that time the main highways were not where they were most needed: the excellent road to the new International Airport at Comalapa was part of a plan to open up the area to the east which was never completed, the road from San Salvador to the port at Acajutla runs for most of its length as a badly deteriorated 2-lane highway, with the greatest volume of traffic in the country. Priorities are now much changed, and a completely new look at the national highway plan will be required; whatever funds become available will have to go more for quantity than quality.

Much emphasis is placed on the damage done to the highway system by the recent earthquake, and while this was certainly found to be the case with the new highways, older roads were determined to have deteriorated more through neglect. It was estimated that current levels of road maintenance cover less than 30% of actual requirements. The representatives of the Ministerio de Obras Publicas enumerated the following as reasons for the poor general condition of the older roads, rural roads in particular:

1. The national budget allocation for road repair was never sufficient.
2. Road repair equipment had been one of the main terrorist targets, and severe losses had been experienced.

3. The ministry had insufficient equipment to complete the work.
4. Only about 30% of the existing equipment was in working order due to the shortage of spare parts.

A review of the road repair facilities revealed that the poor road condition stemmed from, in the first place, inadequate facilities for the upkeep of the available equipment, and secondly from the absence of private-sector involvement in this activity.

While it is certainly not possible to work without an adequate budget, it was judged that it would be possible to make better use of the money that was available.

Trucking

The number of commercial vehicles with capacity more than 6 tons registered in 1985 was 7,414, this according to figures released by the Ministerio de Hacienda. Of these, 756 were in the range 10 to 15 tons, and 615 were in the range 20 to 25 tons.

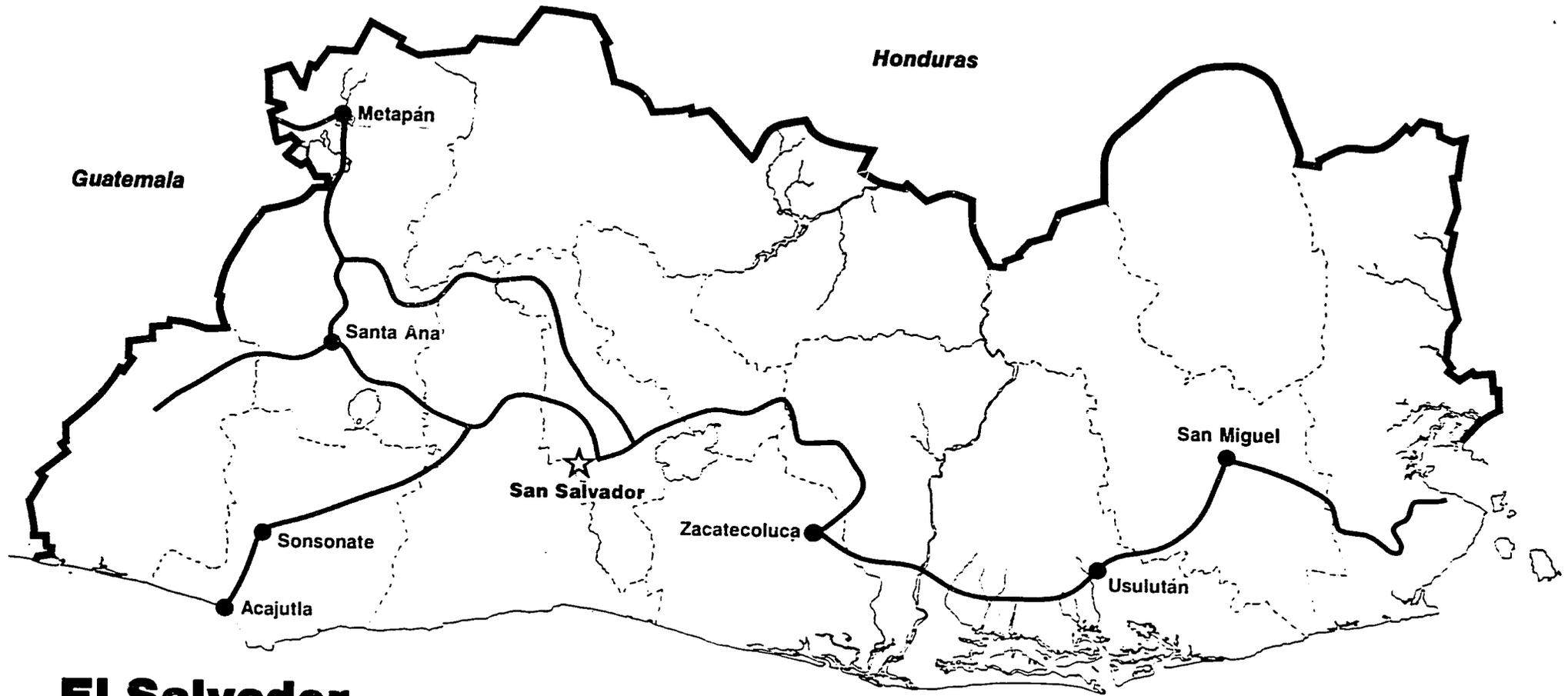
Six major companies are registered in El Salvador as being in the business of providing trucking services, but in addition to these there is a considerable number of small companies, and a few major international maritime shipping companies that offer land transportation to ports on the Atlantic Coast of Guatemala or Honduras.

At some stage all the country's exports, imports, and domestic produce are transported by road. While the railroad does have the capability to transport in bulk from the port to the mill or factory, in recent years it has not had the capacity to do this, and so much of its freight now goes by road. The total weight of imports and exports together is about 2.0 million tons per year.

Figures from the Ministerio de Hacienda estimate that the theoretical monthly capacity of the trucking fleet is 1.5 million tons. While the actual capacity may be nearer half this figure, due to breakdown and so forth, there would appear to be reasonable capacity to handle import and exports and domestic freight.

RAILROAD SYSTEM

The rail network of El Salvador (FENADESAL) extends 600 kilometers, connecting San Salvador with the ports of Acajutla and Cutuco, as well as with other major urban centers, including Santa Ana, San Miguel and Sonsonate. It also connects with the Guatemalan rail network, and was designed to permit direct rail transit from El Salvador to the Guatemalan ports on the Caribbean. This connection is no longer in service.



El Salvador

Railroads

FENADESAL has 10 diesel-electric locomotives and 4 steam locomotives. There are more than 500 wagons for moving cargo and about 8 passenger wagons. Rail service is offered on a daily basis and extra trains are provided to meet peak cargo requirements. The railroad--through contracts with several trucking companies--is currently promoting door-to-door freight service.

In 1985 FENADESAL carried 325,000 tons of cargo. Of this total, exports amounted to 67,000 tons and imports 120,000 tons. The remaining movements were local. The rail has an important role in carrying cargo to and from the Port of Acajutla and Cutuco. In 1985, for example, FENADESAL carried almost 25% of the export cargo moved through the port and about 20% of the import cargos. Recent political unrest has led to periodic service interruptions.

Both the track structure and rolling stock of the current rail system are in need of upgrading.

The ability of FENADESAL to continue providing service has been severely curtailed by terrorist activities. While the recent earthquake has made sections of track impassable and bridges unsafe, much rolling stock and motor units have been damaged by acts of violence.

Average costs of using rail freight were quoted as about four cents (US\$0.04) per ton-kilometer. These rates were extremely competitive with trucking rates, the highest rail rate being about equal to the lowest of the trucking rates.

It is clear that, while it was in operation, FENADESAL provided a service that kept the cost of land transportation within the country down to a low level. Of the countries in the region, El Salvador is the only one whose railroad system occupied a significant place in the national transportation system. With the reduction of service provided by FENADESAL, and with the consequent demand for increased trucking capacity, the cost of transport in the country has risen accordingly. Such rises have occurred at precisely the time that CBI initiatives might have had some impact, but the rises served to offset any advantages that free flow of trade to the US might have offered.

There is a clear case for giving serious consideration to building up FENADESAL to its former level. Before the earthquake there was a project in place for the "integral rehabilitation of the national railroad system", with the object of determining the most appropriate system for El Salvador. While the costs associated with the project have undoubtedly risen, it is now even more critical to determine what can be salvaged from this cheap transportation mode.

MARINE TRANSPORTATION

El Salvador's major port is at Acajutla on the Pacific. In addition, there is a port at Cutuco, on the Gulf of Fonseca. The principal outlet for Salvadoran exports to the eastern US or to Europe is the Guatemalan port of Santo Tomás de Castilla. Some cargo is routed via Puerto Cortés in Honduras.

The port of Acajutla is southwest of the capital, some 85 km by road and 103 km by rail.

The layout of the port is in the form of the capital letter "F", with pier A being the top horizontal and pier B the lower. Pier C is an extension of pier A. The piers are divided into 8 berths. Pier A has two berths. It is 300 meters in length and 37 meters in width. Water depth varies between 10 and 12 meters. The two berths on this pier handle general, bulk and liquid cargo. There are two 3-ton moveable electric cranes and a pipeline at the pier. In addition, a transit warehouse with a protected area of 4,500 square meters is available.

Pier B is 380 meters long on the north side and 336 meters on the south side. The width of the pier is 28 meters and the water depth varies between 10 and 12 meters. While it handles general cargo and containers, Pier B is mainly used for bulk cargo. It has a bulk unloader which discharges into a conveyor belt system.

Pier C serves mainly as a breakwater and can handle tankers up to 40,000 deadweight tons. It is 301 meters long and 19 meters wide. Water depth averages about 13.5 meters.

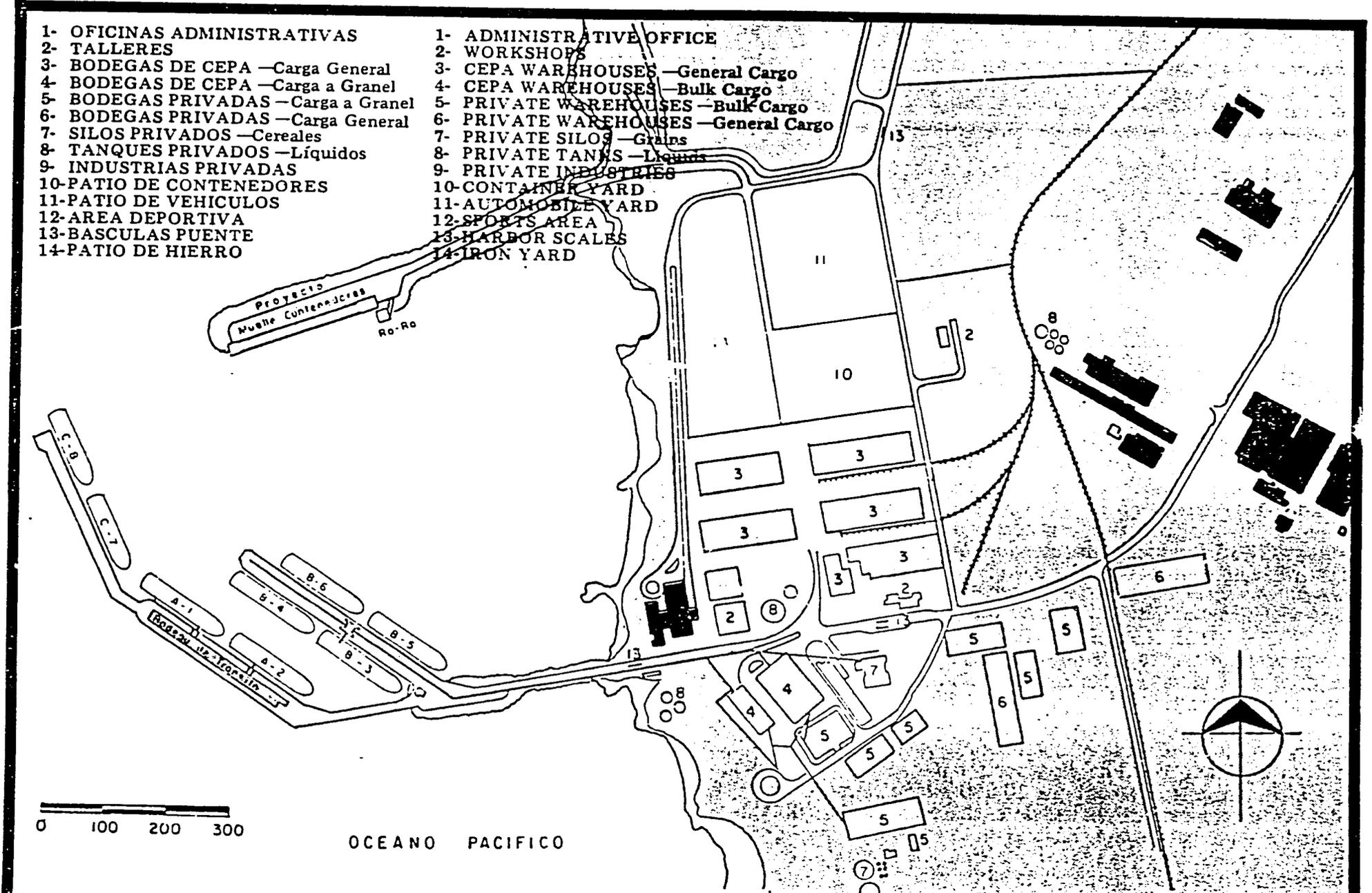
The port has 32,000 square meters of covered storage areas. Open storage areas include a yard of 36,000 square meters for storage of automobiles, an area of 24,500 square meters for general cargo, and 74,000 square meters for container storage. Bulk cargo warehouse capacity totals more than 30,000 tons.

PUERTO DE ACAJUTLA

SAN SALVADOR, EL SALVADOR, C. A.

- 1- OFICINAS ADMINISTRATIVAS
- 2- TALLERES
- 3- BODEGAS DE CEPA —Carga General
- 4- BODEGAS DE CEPA —Carga a Granel
- 5- BODEGAS PRIVADAS —Carga a Granel
- 6- BODEGAS PRIVADAS —Carga General
- 7- SILOS PRIVADOS —Cereales
- 8- TANQUES PRIVADOS —Líquidos
- 9- INDUSTRIAS PRIVADAS
- 10- PATIO DE CONTENEDORES
- 11- PATIO DE VEHICULOS
- 12- AREA DEPORTIVA
- 13- BASCULAS
- 14- PATIO DE HIERRO

- 1- ADMINISTRATIVE OFFICE
- 2- WORKSHOPS
- 3- CEPA WAREHOUSES —General Cargo
- 4- CEPA WAREHOUSES —Bulk Cargo
- 5- PRIVATE WAREHOUSES —Bulk Cargo
- 6- PRIVATE WAREHOUSES —General Cargo
- 7- PRIVATE SILOS —Grains
- 8- PRIVATE TANKS —Liquids
- 9- PRIVATE INDUSTRIES
- 10- CONTAINER YARD
- 11- AUTOMOBILE YARD
- 12- SPORTS AREA
- 13- HARBOR SCALES
- 14- IRON YARD



0 100 200 300

OCEANO PACIFICO

About 1.1 million metric tons of cargo moved over the berths in 1985. Of this total, which excludes petroleum products, exports were 275,000 metric tons. Liquid bulk cargoes, such as alcohol, were exported in a quantity of almost 13,000 metric tons. The other 262,000 metric tons of exports was divided almost equally between general cargo, primarily coffee, and bulk cargoes such as sugar. The detailed cargo movements are shown in Table 4.1.

Table 4-1
El Salvador
Port of Acajutla
Cargo movements 1984, 85 & 86
(Metric Tons)

	<u>1984</u>	<u>1985</u>	<u>1986</u>
Imports			
General cargo	224,378	207,233	232,270
Bulk	522,567	611,337	616,118
Liquid Bulk	<u>48,145</u>	<u>54,284</u>	<u>74,835</u>
Total	795,090	872,854	923,223
Exports			
General cargo	154,181	130,830	93,374
Bulk	85,380	130,519	99,240
Liquids	<u>757</u>	<u>12,842</u>	<u>14,928</u>
Total	240,318	274,191	207,542
Imports Plus Exports	1,035,408	1,147,045	1,130,765
Petroleum & Products			
Imports	591,913	644,213	677,961
Exports	--	10,134	47,665
Total Cargo Movements	1,627,321	1,801,392	1,856,391

Source: Comision Ejecutiva Portuaria Autonoma (CEPA)

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More than 43% of all exports from the port are destined for the United States. These shipments are overwhelmingly to the western part of the US. Shipments to the eastern part of the US via the Panama Canal are limited. Other major destinations, primarily Europe and the Soviet Union, take 40 percent of exports through Acajutla. These shipments are normally routed via the Panama Canal.

The Port of Cutuco is located on the Gulf of Fonseca near the frontier with Honduras. The port is 185 km from San Salvador by road and 252 km by rail. The port has two berths for the handling of general cargo and dry bulk and liquid bulk cargoes. Berth lengths are about 160 meters and some 7 meters in width. Water depth is between 7.5 and 9 meters. The port has 26,000 square meters of covered storage area and an open yard of some 480,000 square meters. Traffic through the port is modest with annual volumes of about 50,000 metric tons a year. Principal cargoes are coffee and cotton exports and fertilizer imports.

The port at Acajutla was designed to handle the bulk commodities which it was considered at the time to be of certain demand for the future. These were coffee and sugar exports, and grain imports. The facilities in the port are the best in the region for these activities, and the port is certainly the most active on the Pacific coast.

Figures of cargo handled at Acajutla in the ten years from 1977 to 1986 show that imports have remained fairly consistent at around 875,000 tons (maximum 1,191,000 tons, minimum 518,000

tons), while exports have shown a declining trend from a peak of 1.6 million tons in 1977. Thus, in overall terms, the port is currently operating at a capacity that is less than its previous peak.

The handling of containers, however, has shown a different pattern, having grown from a few hundred in 1977 to about 9,000 containers in 1986. The breakdown between imports and exports, loaded and empty is shown in Table 4.2.

Table 4.2
El Salvador
Acajutla Container Movements
1986

	Number of Containers		<u>Total</u>
	<u>Loaded</u>	<u>Empty</u>	
Imports	3180	1514	4694
Exports	<u>2128</u>	<u>2106</u>	<u>4234</u>
Total	5236	3620	8928

	Number of TEUS*		<u>Total</u>
	<u>Loaded</u>	<u>Empty</u>	
Imports	4215	1684	5899
Exports	<u>2530</u>	<u>2730</u>	<u>5260</u>
Total	6745	4414	11159

*Twenty Foot Equivalent Units

Source: Comision Ejecutiva Portuaria Autonoma (CEPA)

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In 1986, the demand for import container space was about 1.7 times the demand for export space, though by mid-1987 the export demand had fallen considerably. It is normal in the region for import demand to be greater than export demand, and factors of 2 and 3 times are not uncommon. The difference between import and export demand normally requires that a number of empty containers has to be handled, 25% being an acceptable proportion of the total. In the case of Acajutla, the proportion was nearer 40% indicating a lack of coordination between importers and exporters.

Of significance in solving the problems of imbalance at the port is the fact that so much of the nation's exports leave by road. Table 4.3 shows the nation's SITC export profile in 1985, with the distribution between Acajutla and other modes. As can be seen, 46% of the nation's exports go by either road or air, though the contribution of the airfreight mode is small. Much of the export by road is containerized, and is destined for Santo Tomás in Guatemala. Were this cargo to leave by Acajutla, better use could be made of the container inventory, and the nation would not be paying for the import and export of empty containers.

Container loading and unloading at the port is mostly done by the ships' own equipment. The port provides tractor-trailer units for movement of containers between berths and storage yard, and provides heavy equipment in the yards for container stacking.

Table 4.3
El Salvador
Acajutla Export Profile
1985
Tons

<u>SITC Code</u>	<u>Description</u>	<u>Total</u>	<u>Acajutla</u>	<u>Other</u>
0	Food Etc.	312,356	230,496	81,860
1	Drinks & Tobacco	-	-	-
2	Crude Materials	48,006	16,723	31,283
3	Mineral Fuels	71,336	-	71,336
4	Animal/Veg. Oils	2,899	4	2,895
5	Chemicals	18,010	12,900	5,110
6	Basic Manuf.	35,204	1,980	33,224
7	Mach. & Transp. Equip.	0	0	-
8	Other Manufactured	4,613	1,576	3,037
9	Others	-	-	-
	Total	492,424	263,679	228,745

Source: Comision Ejecutiva Portuaria Autonoma (CEPA)

For the handling of large numbers of containers, piers of the type at Acajutla are not efficient: there is not room for the heavy lifting equipment required to speed up the operations, and the shortage of storage space on the piers mandates a large fleet of tractor-trailer units to move the units the considerable distance to the storage yard. As containerization increases, the current layout will make container operations more and more expensive. At some stage the construction of a container terminal will be necessary. Plans for such a terminal have been in existence for some time, and the port layout is based on the future construction of the facility. However, there is some question as to whether waves and swell in the basin created by the new structure will not make the ships too unstable. This is a problem that will need a solution in the near future.

A total handling demand of about 10,000 containers per year would make the purchase and installation of a dedicated container crane a worthwhile proposition, though the current berth arrangement leaves no suitable place for its location.

The port authority has bought a considerable amount of cargo-handling equipment in recent years, but a review of records showed that only about half was ever in working condition, and that the demand for such equipment often exceeded what could be made available.

The port has a small workshop for the repair and maintenance of equipment. Inspection revealed that it was designed for light equipment, and did not have the facilities for dealing with the heavier items. The area around the workshop served as a yard for the storage of items of equipment that were unserviceable, many of which had been stripped of useful parts. It was stated that the most serious problem facing the workshop was the obtaining of spare parts. Not only was this normally a long process, but since it involved importing there was the added difficulty of finding foreign exchange. The workshop had a small inventory of parts such as filters, but had not the budget to expand this.

The problem of port workshop facilities is common throughout the region, and is an area that deserves considerable attention. There is no doubt that port operations could be made more efficient by simply using existing equipment to its greatest advantage, and that involves having not less than 80% of equipment available for use at any given moment.

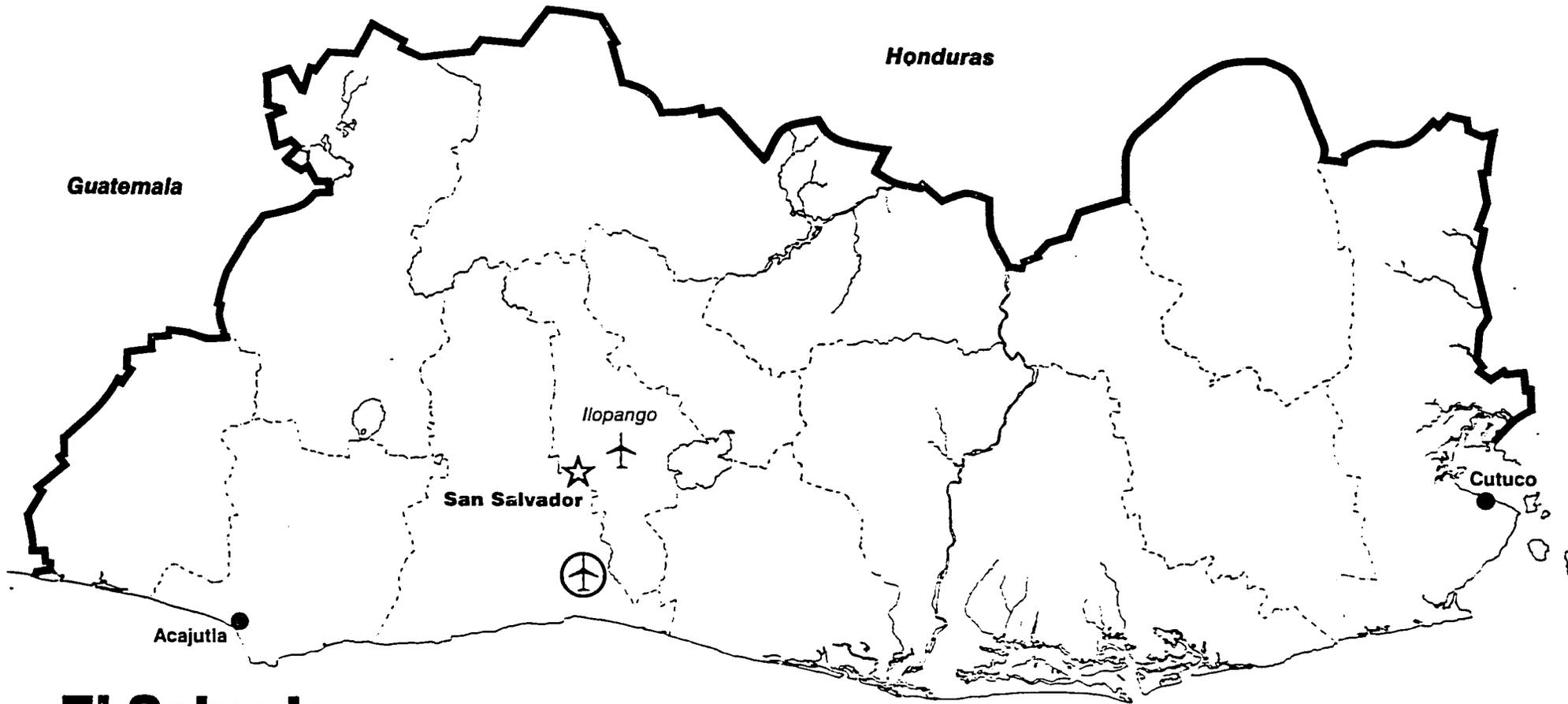
Liner Service

As far as most exporters are concerned, the most regular liner services servicing El Salvador call at Santo Tomás in Guatemala. The major shipping lines, such as Sea-Land, CCT, and Seaboard, with offices in Guatemala, will collect containers in El Salvador and truck them to Santo Tomás. Some will also go to Puerto Cortés in Honduras, but the trip is not popular with truckers.

The major line providing service to Acajutla is Gran Colombiana, connecting that port with other Pacific ports of North and South America. With exports of general cargo at only 130,000 tons, and container facilities lacking, the competition for providing liner service is at a very low level. It was also noted that exporters tended to view Miami as the most desirable US market for their products, so demand for better service at Acajutla was not great.

AIR TRANSPORT

El Salvador is fortunate to have one of the most modern airports in the region, and one which has become the hub of considerable air freight activity. Constructed in the late 70's, and opened in 1980, the International Airport took over from the old airport at Ilopango. The new airport is located approximately 40 km to the south of San Salvador, to which it is linked by a 4 lane highway. The location was selected for, amongst other considerations, its location close to potential beach resort areas on the Pacific.



El Salvador

Principal Ports & Airports

✈ Airport

✈ Major International Airport

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The journey to the capital takes less than 30 minutes in off peak hours, but about 50-60 minutes during congested peak periods.

San Salvador International Airport has both a passenger terminal and a cargo terminal. The passenger terminal is a 3 level structure housing service facilities, including customs, immigration and health offices as well as administrative space for CEPA.

The main runway is 3200 meters in length and 45 meters in width. There is a secondary runway 800 meters long to handle small aircraft. The El Salvador airport is serviced by an omni-directional VHF radio beacon, an instrument landing system and approach lights systems.

Air cargo facilities are located apart from the passenger terminal. A freight terminal of 7,900 square meters faces three airplane parking positions. Most of the terminal is dedicated to cargo storage, with a small section allocated to customs. The terminal has facilities for cold storage, frozen storage, and strong rooms for high value cargo. For the most part the terminal is operated by CEPA for general use, with only TACA operating their own service in an area set aside for them.

Table 4.4
El Salvador
Air Freight
(tons)

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Imports	4,585	5,255	6,363	6,174	5,677
Exports	<u>2,659</u>	<u>3,677</u>	<u>4,766</u>	<u>4,428</u>	<u>3,160</u>
Total	7,244	8,932	11,159	10,602	8,837

Source: Comisión Ejecutiva Portuaria Autónoma (CEPA).

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Air freight activity in El Salvador has demonstrated a general tendency to increase over the last few years, as shown in Table 4.4. The underlying growth, however, is swamped by the annual swings, particularly to and from the peaks of 1984 and 1985. The least stable growth has been exhibited by exports, with a variation about the average of 29%; this compares with only an 18% variation in imports from year to year. The statistic implies that export demand for airfreight is extremely uncertain, and can be 30% more or less than forecast from a trend projection.

Table 4.5
El Salvador
Air Freight
1986
Cargo By Carrier
(kilogram)

<u>Carrier</u>	<u>Imports</u>	<u>Exports</u>
TACA	3,014,004	1,917,485
AESA	1,283,510	663,475
SAHSA	284,307	38,994
AEROPUMA	226,233	121,439
TAES	172,691	119,591
LACSA	163,312	165,207
PAN AVIATION	134,375	-
COPA	102,315	119,893
AERONICA	97,568	11,175
CHALLENGE	44,448	1,453
PANAM	16,109	-
MAXESA	11,640	-
WYLLIE AIR CORP	6,726	-
MIAMI AIR LEASE	5,047	-
AVIATECA	-	1,084
ASTRO AIR CORP.	464	-
OTHER (LAND)	114,071	-
Total	5,676,820	3,159,796

Source: Comision Ejecutiva Portuaria Antonoma (CEPA)

In spite of the unpredictable demand for export space, El Salvador International Airport has attracted the attention of a large number of carriers. As Table 4.5 shows, in 1986 the air freight was carried by 16 separate airline companies. The last entry on the table - land freight - reflects the fact that truckers are required to clear customs formalities at Comalapa for imports that can move under customs seal.

Fully 50% of imports and 60% of exports are carried by the one line, TACA. Of next in importance is AESA, with about 20% of both imports and exports, while the largest of the remainder accounts for less than 5% of the demand.

Table 4.6 shows the origins and destinations of the nation's air freight, and illustrates how well El Salvador is connected with the rest of the world. While the overwhelming majority of cargo goes to and from Miami - 55% of both imports and exports - considerable amounts go to and from other countries in the region and to cities on the west coast of the USA.

Published figures do not indicate the amount of cargo consolidation and redistribution that takes place at the International Airport. Discussions with airline officials, however, reveal that a considerable amount takes place, and for much regional cargo inbound, El Salvador is used as a redistribution center.

Among other advantages, the airport at Comalpa has the advantage of being located at only 25 meters above sea level. For cargo aircraft, a low elevation such as this means that planes can land and take off fully-loaded. When operating at the attitudes of Guatemala City, Tegucigalpa, or San Jose, much payload capacity is lost. Hence the preference for loading up in Miami, flying to San Salvador, then redistributing for the higher altitudes.

Given the number of companies offering freight service out of San Salvador it is to be expected that there is some competition in the rates. Typical rates from San Salvador to Miami range from US\$0.80 to US\$1.35 per kilo, depending on size of consignment. Certain commodities receive considerable discounts, so that fish and shellfish can go for US\$0.55 per kilo, and garments and cut flowers can go for US\$0.62 per kilo.

Table 4.6
El Salvador
Air Freight
1986
Cargo By Origin & Destination
(Kilograms)

<u>Origin/Destination</u>	<u>Imports</u>	<u>Exports</u>
Miami	3,177,944	1,706,092
New Orleans	755,337	532,019
Panama	625,410	181,107
Guatemala	267,719	105,340
Los Angeles	232,732	221,406
Mexico	232,003	18,172
San Jose	162,056	201,150
Tegucigalpa	93,862	80,060
San Pedro Sula	69,370	-
San Andres	26,110	-
Managua	8,444	30,447
Houston	6,924	42,417
Merida	1,556	-
San Francisco	1,541	9,602
Madrid	696	-
Medellin	659	-
Belize	499	16,085
Caracas	418	114
Santo Domingo	221	-
New York	216	-
San Juan	211	15,556
Zurich	6	-
Tokyo	3	-
Maracaibo	-	229
Total	5,663,941	3,159,796

Source: CEPA

The only problem of any seriousness that could be found in the operations of air cargo was one of an impending shortage of cargo storage space. The existing transit shed should be more than adequate for the purposes of El Salvador, it having been determined from inspection that it could accommodate double the current average demand. The capacity of such a facility is dependent on quick collection by the consignee: if collections are delayed, then the cargo backs up. The most frequent cause of delay at Comalapa was customs inspection, and for the future this could become a serious bottleneck.

Government revenue depends in large part on the collection of duties, such as those levied on imports. It is thus important for customs inspectors to make sure that no dutiable item eludes them. The process of duty assessment thus involves a detailed inspection of each item of import, ensuring at the same time that no contraband smuggling is taking place. Where customs labor is cheap and volumes of imports are low, detailed inspections are not harmful, but when volumes increase it becomes more realistic to consider spot checks. The normal objection to this system is that it encourages bribery, in that inspectors could be induced never to spot check certain imports; when every package is opened it is harder to conceal contraband. Bribery, however, is always possible with any system, and it is never easy to eliminate it if one starts with the assumption that all the employees in a certain sector are potentially corrupt. If customs inspections are not to be a bottleneck in the future, either more inspectors will be required, with more space for them to work in, or spot checking will need to be introduced.

In this regard, it should be noted that the operators of the cargo facility - CEPA - are fully aware of the potential customs bottleneck, and offer importers and exporters their assistance in trying to resolve any conflicts with customs.

COMPARATIVE TRANSPORT COSTS

The Regional Comparison

A pervasive complaint of transport users in El Salvador--particularly those who export to Miami by ship--is that their overall transportation costs are higher than those paid by exporters in neighboring countries. Throughout the region exporters--particularly those whose products move in small volumes--tend to say that their transport costs are high and burdensome. Salvadoran exporters, it should be recalled, have the added burden of relying on a Caribbean port in a neighboring country when they route to Miami.

Table 4.7 indicates the comparative rates for a 20-foot container of dry cargo from the various ports of Central America to Miami, or an equivalent Gulf port. The table contains a number of assumptions, needed to make the figures comparable, and it is certain that some shippers paid more than these figures and some paid less.

The basic figure is the door-to-US-port charge of major shipping lines operating within the country. This figure is the one-time charge levied by the shipping line for carriage from the producer's factory to the dockside in Miami. The charge includes land transport to the port, documentation charges, stevedoring charges, port charges, sea freight, and port and stevedoring

charges in the USA. Estimates were made of the current cost of each of these activities in the chain, emphasizing the fact that these separate charges have to be met even if the same company handles the consignment from start to finish. Even shipping lines that operate their own trucking fleets have to pay market rates for trucking operations. Port charges and stevedoring are based on estimates of costs to the average vessel loading or unloading.

Table 4.7
Typical Costs of Moving a 20 ft Container
US\$ Per Container

Port		Door to	Trucking	Port	Sea US	
<u>Country</u>	<u>US Port</u>	<u>To Port</u>	<u>Charges</u>	<u>Freight</u>	<u>Charges</u>	
GUA	A*	2,018	363	100	1,200	355
	P*	2,500	240	100	1,800	360(LA)**
C.R.	A*	1,475	300	550	325	355
PAN	A*	1,700	350	150	850	350
	P*	1,900	300	200	1,040	360
BEL	A*	1,790	40	300	1,100	350
HOND	A*	1,800	300	450	700	350
EL S	A***	2,150	500	100	1,200	350
	P*	2,330	60	100	1,800	360(LA)**

* Atlantic or Pacific port.

** Los Angeles

*** Routing through Santo Tomas de Castilla in Guatemala.

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Notes for Container Costs Table.

1. Door-to-US-port charges were based on actual quoted rates for a 20 ft container of typical non-perishable product. Origin was taken as within a 40 km radius of the capital city, and destination was taken as the container yard of a typical US Gulf port (mostly Miami).
2. Trucking to port charges were based on quoted rates for collecting the full container and delivering it to storage at the Atlantic or the Pacific port.
3. Port charges were based on typical per-container costs levied by the port of the country for loading the container from storage to the vessel. Stevedoring charges are included, as are vessel charges. Fixed costs were allocated per container depending on typical volume loaded/offloaded.
4. Sea freight charges were determined to be the cost to the shipper of the purely maritime transport. The charge was arrived at in conjunction with estimates made by operators of the shipping companies.
5. US port charges were based on typical per container charges payable at the typical Gulf port. Fixed costs were distributed according to typical volume loaded/offloaded.

6. The purpose of the table is to enable a general comparison of the relative costs of exporting non-traditional products from each of the countries. All estimates are conservative: most exporters could obtain rates lower than these, but for the inexperienced low-volume exporter the figures are not unreasonable.

The calculation of typical costs for a typical container requires careful consideration: door-to-US-port charges, on the one hand, are directly comparable because they are well established for a particular commodity on a particular route; port charges, on the other hand, are a function of the vessel size, the number of containers handled, the equipment used, and so forth. The door-to-US-port charge was the same for 25 containers or 50 containers, as was the trucking charge, but the port charges--evenly distributed between the containers--were very different for 25 or 50 containers.

One approach was to standardize the calculation by assuming that the same size vessel and the same number of containers was used on each occasion. This concept, however, conflicted with the reality in each country: adopting 50 containers might be representative in one port, but it could be excessive at another. The system adopted was to report the costs that interviewees reported as being their average. These were cross-checked in each country, and the most consistent amount was reported in the table.

The table shows that exporters from Costa Rica had a basic cost advantage in exporting to the USA. Recent introduction of service by one of the world's major container companies, Evergreen, served to introduce increased competition, and so rates were reduced considerably. This company is discussing further plans with the port authorities at Limón in connection with construction of a major transshipment terminal.

Panama, Belize and Honduras were all charged approximately the same for the 20-foot container service shown. It was felt that the small differences shown in the table demonstrated no real advantage of one country over another in this group.

Guatemala and El Salvador have a rate that is somewhat-- though not by much--greater than for Panama, Belize, and Honduras. The Atlantic rate for El Salvador is greater than that for Guatemala, as might be expected since the port used was Santo Tomás in Guatemala.

There was found to be an unexpected consistency in the costs involved in trucking the container to the nearest port-- unexpected because the distances involved were so different. In Guatemala, Costa Rica, Panama, and Honduras the rates were comparable, though Costa Rica and Honduras profited from being at the lower end of the range (\$300), and Guatemala and Panama had the disadvantage of being at the higher end (\$350-363). For the exporters of El Salvador the trucking cost to Santo Tomás involves an additional \$140 over the exporter from Guatemala City. The lowest in the region was the cost to the exporter from Belize, since the capital is adjacent to the port.

Port charges varied considerably, from \$100 at Santo Tomás and Acajutla to more than \$500 for Limón and \$450 for Puerto Cortés. Given the caveats regarding these figures, it would be safe to conclude that Limón and Cortés are comparable in terms of charges. The ports of Panama and Belize fell between these two extremes.

The charges shown for sea freight were the most controversial for the group, since the different lines operated differently, and thus considered that the costs were not comparable. The point was accepted. However, the figures were retained and serve to illustrate the approximate proportion of the door-to-door charge that is under the control of the shipping lines (i.e. ocean costs), and hence determine the range of reduction that negotiation could achieve. An attempt to negotiate a 10% reduction in a door-to-door charge of \$2000, for example, would fail when it signified a 20% reduction to a shipping line whose ocean costs were only \$1000.

The range of the sea freight allocation varied considerably, from of the order of \$325 per container from Costa Rica to approximately \$1,200 from Guatemala. Given the probable accuracy of the survey, it was concluded that sea freight on a 20 foot container to Miami was about \$1,000, more or less depending on other factors. Clearly, one major factor that influenced the cost was the efficiency of the port, with exporters from Panama and Honduras benefiting from better-than-average efficiencies.

The sea freight from Costa Rica was distorted by the fact that the major shipping line consolidated in Jamaica before carrying to the USA. Had this not been the case, costs would have been more in line with those of the other ports.

The exporters from Guatemala suffered the expenses involved in loading a considerable number of containers each year (over 46,000 in 1985) without the appropriate equipment and facilities. While the charges levied by the port reflected the absence of such equipment, the cost of slowly offloading each ship using ship's equipment is reflected in the sea freight component of the costs.

Sensitivity of Exports to Transportation Cost

Table 4.8 demonstrates the relative sensitivities of different export products to the cost of transportation.

The table was prepared from information gathered relating to prices and quantities prevailing in 1985. The figures shown are typical ranges, and are presented to demonstrate overall comparisons. Individual exporters may pay or receive more or less than the figures shown, depending on such variables as location of production area in the country, volume shipped, final destination, and so forth.

The typical unit prices for the products are given FOB the customary Atlantic port, Santo Tomás, and include an allowance for land transportation and port charges. The percentage of total cost which is represented by transportation is the ratio of the sum of all transportation costs to the price of the product landed at a typical port overseas (e.g. Miami). Items not actually exported from El Salvador have been added to the table for comparison purposes, extrapolating information from other countries in Central America to arrive at the ranges given.

Table 4.8
El Salvador
Comparative Unit Costs of Exports
1985

<u>Export Product</u>	<u>Typical Unit Prices FOB US\$</u>	<u>Typical Total Transportation Cost as % CIF Price</u>
Shrimps	\$ 4,000- 5,000/ton	5-10%
Frozen Meat	\$ 1,900-2,200 /ton	12-15%
Coffee	\$ 2,400-2,700 /ton	10-15%
Pineapples	\$ 350-400 /ton	40-50%
Melons	\$ 340-380 /ton	40-50%
Grapefruit	\$ 250-280 /ton	50-60%
Fresh Cut Flowers	\$ 2,000-2,500 /ton	55-65%
Fruit Jams/Jellies	\$ 500-550 /ton	35-45%
Cocoa Beans	\$ 2,000-2,200 /ton	13-16%
Palm Oil Seeds	\$ 250-300 /ton	45-55%
Seeds, Tubers, Roots, etc.	\$ 860-910 /ton	25-30%
Wood Furniture	\$ 1,200-1,500 /ton	20-25%
Doors, Window, etc.	\$ 300-350 /ton	40-50%
Bamboo Furniture	\$ 4,000-4,200 /ton	5-10%
Cardboard Boxes etc.	\$ 530-560 /ton	35-45%
Metal Lids, Tins, etc.	\$ 9,000-9,250 /ton	2-5%
Female Underwear	\$22,000-25,000/ton	neg.

Source: Parsons Brinckerhoff International, field interviews.

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The table shows that, for the most part, fresh fruits and vegetables are extremely sensitive to the cost of transportation. Since these products are sold on a commodity basis--the price is based on the day-to-day balance between quantity supplied and quantity demanded--there is no opportunity for the exporter to pass a transportation cost increase on to the consumer. Any such cost increase has to come out of his margin. Clearly, where transportation accounts for up to 50% of the buyer's cost, an increase of, say, 10% in the cost of transportation could reduce a seller's margin by a considerably greater percentage.

Typical Margin Analysis. Taking the typical case of an exporter of fresh fruit and vegetables, here melons, selling in Miami, a typical breakdown on a tonnage basis would be:

Typical Cost Breakdown for Melons Selling in Miami

production costs	\$225 /ton
transport & selling costs	\$250 /ton
administrative costs	\$ 15 /ton
Total fixed costs	\$490 /ton
Total income on sale	\$650 /ton
Margin on sale	\$160 /ton

The margin is used for recovery of initial investment and payment of interest and, finally, some profit for the producer. It is the margin that determines whether the exporter will remain in business or not.

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If transportation and selling costs go up by, say, 10%, the distribution becomes:

Effect of 10% Transport Cost Increase on Margin for Melons

production cost	\$225 /ton
transport & selling costs	275 /ton
administrative costs	15 /ton
Total fixed costs	<u>515 /ton</u>
Total income on sale	650 /ton
Margin on sale	<u>135 /ton</u>

The 10% increase in transportation cost has thus reduced the margin by 16%, and has probably made production unprofitable. (We have kept the production cost constant, though in reality this would have a transportation content and would thus increase.) Common agricultural products produce very small margins, and it is safe to suppose that most growers in Central America have much smaller margins than that shown in the above example. Thus, as a generalization, every percentage increase in the cost of transportation reduces the producer's margin by 1.5 to 2%; since the profit margin is small, only a few percentage point increases in transportation cost will account for all profit and start eating into the producer's ability to repay his debts.

As can be seen from the earlier table of comparable unit costs, melons have a fairly average unit value, and include most of the properties of the typical fresh fruit and vegetable exports of the country. Thus, in economic terms, the above figures could be aggregated and generalized to represent the situation of non-traditional agricultural exports.

Transport Cost Vs Export Volume

Attempts were made during the analysis phase of the project to determine the sensitivities of export volumes to the cost of transport. It was concluded that, on the surface, the volumes exported were not directly responsive to transportation costs. This conclusion had already been reached by persons responsible for price-fixing of transportation in El Salvador, and was often used as a justification for price increases.

Unfortunately, when the actual effects of cost changes are calculated, it appears that it is indeed only on the surface, or in the short term, that the volumes shipped are insensitive to changes in transportation costs. Producers do not stop shipping the moment their costs go up; they merely find it harder to pay their debts and stay in business. In the long term, many will be forced out of the export business entirely, making their volume eventually crash abruptly to zero.

Thus there is a clear connection between changes in transportation charges and the ability of the non-traditional exporter to stay in business, though export volumes may not be affected immediately. Since agricultural production starts some considerable time before use is made of the transportation system, and because agricultural cost accounting is not sophisticated in El Salvador--the final balances are not calculated until the product has been harvested and sold--there may not be an immediate correlation between the transportation cost and the volume exported.

There will, however, be a correlation between transportation costs and businesses being started or being terminated. Amongst other things, this translates into a connection between bankruptcies and increases in transportation costs. Analysis of the goods traded each year show that a considerable number of items disappear each year from the list of exports and new ones appear. Even though, overall, export values and tonnages increase, this only happens because the composition of the exports alters each year. Thus, to introduce an increase in transportation costs and to note that exports did not fall off as a result is to not recognize the damage that is being done to the economy as businesses are forced into liquidation.

Not all the export products, however, are so sensitive to the cost of transportation: those items that have value added as a result of some degree of processing count transportation as a much smaller fraction of the overall cost to the buyer. Where these items are not commodities, and subject to worldwide pricing forces, the price increases can often be passed on to the buyer. With bamboo furniture, for example, prices are fixed by agreement between the buyer and the seller, and the proportion of the cost of transport is only 5 to 10%, it is therefore not likely that less would be sold if transportation costs rose, or more sold if transportation costs dropped.

El Salvador is fortunate among the countries of Central America in that more than 50% of non-traditional exports involve value-added processing, particularly exports to other parts of Central America. Most of the other countries have a preponderance of low unit price commodities for exports and are thus supremely sensitive to the cost of transportation.

TRANSPORTATION-RELATED CONSTRAINTS

It is clear that the exporters of non-traditional products from El Salvador are in difficulties: Table 4.9 shows that the general trend of exports over the years has been decreasing. While some of the causes of the decrease may be related to transportation, it would be hard to conclude that the transport contribution would be other than very small. In many ways, the decreases have come about in the face of some considerable transportation advantages.

The Road System

- o In spite of recent new highway construction, the national road system is deteriorating. This has the effect of making road transportation more expensive than it need be. However, with a long-distance, fully-loaded trucking rate of US 6 cents per ton-kilometer, the cost of land transport is extremely competitive. For short distances and for loads less than the maximum the rates can be 3 to 4 times this rate.

- o It is not likely that the condition of the national road system, particularly in rural areas, will be significantly improved without a fundamental change in the operation of the ministry's road equipment workshop.

Table 4.9
El Salvador
Export History
(Thousand Colones)

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
All Exports	1,749,000	1,895,000	1,793,000	1,697,000
Traditional Exports	1,204,042	1,393,409	1,241,280	1,295,265
Non-Traditional	544,958	501,591	551,720	401,735

Source: Banco Central de Reserva de El Salvador.

- o The country has been extremely dependent on trade by road within the Central American region. The state of neighboring roads, the internal political tensions region-wide, the delays at frontiers, and the crisis of foreign exchange have all served to lessen the attractiveness of regional trade.

The Rail System

- o The potentially significant contribution of the nation's railroad system has been virtually eliminated in recent years due to past neglect and acts of violence. Any program of national reconstruction will have to give serious consideration to restoring FENADESAL to an acceptable level of operation.

Maritime Transport

- o El Salvador has in Acajutla a port of considerable efficiency, and a capacity to accept increased volumes of exports. Exporters, however, are choosing to use the foreign ports of Santa Tomás de Castilla in Guatemala and Puerto Cortés in Honduras. A revised national export strategy is required to encourage increased use of Acajutla.
- o Acajutla's main deficiency lies in its inability to handle containers cheaply. If exporters are to increase, it will be necessary to ensure that facilities are in place to load and offload containers quickly.

Air Transport

- o The new El Salvador International Airport offers some of the most modern air freight facilities in the region. These facilities have attracted 16 firms of air freight carriers to make San Salvador a base for operations.
- o The air freight tariffs from San Salvador are extremely competitive, and are not, in themselves, constraints to increased exports.
- o Of the air transport in the region, the facilities in San Salvador experience the least amount of political and administrative restrictions.
- o Exporters are not taking advantage of this major national asset.

Institutional

- o Many Salvadoran businessmen appear to lack the experience and skills needed to expand their export markets. For example, although the nation has domestic ports on the Pacific, few Salvadoran products are exported to markets in the Western US. Instead, exporters focus on Miami and New Orleans where business may be easily conducted in Spanish, even though the high cost of reaching Caribbean ports limits the competitiveness of Salvadoran products.
- o There is general agreement that export trade is hampered by a lack of regional cooperation. For example, exporters universally complain about complicated and time-consuming requirements for border crossings. In addition, paperboard and animal feed producers indicated that trucking regulation in neighboring countries bar foreign registered vehicles.
- o In cases of non-traditional export commodities such as melons and shellfish, where many small producers are involved, cooperative marketing would be effective in stimulating trade activity. Typically such trade cooperatives have the size and marketing power to negotiate more effectively with brokers and shipping companies than individual firms. Discussions with local experts indicate that legal arrangements for entering contracts in El Salvador may discourage such cooperative efforts.
- o Government policies of taxing exports add to the cost of international trade.

The Role of the Producer

It was not understood by most interviewees that their own decisions, as much as anything else, influenced the transportation cost. Transportation was seen as a basic commodity that should always be available in the quantity and quality demanded, but at a price that ensured that the product reached the selected market at a competitive price. The impression was given that if these requirements were not met, then the government should step in and ensure that they were met. This fundamental misunderstanding led to the formulation of demands by groups of producers that were directed at entirely the wrong targets--chiefly the government.

The transportation system within a country is a given: the system changes very slowly, and it does so mostly at the demands of the users. When a producer is planning a product for export, the factor of transportation has to be included in the planning. It is erroneous to consider that, merely because natural resources permit the production of a certain commodity, that that item is therefore a candidate for export. The process for determining the exportability of a product is long and complicated, and was not commonly followed through by exporters. The vicious circle that operated in this case was: there was so little margin to make in exporting common non-traditional products that exporters were unable to afford marketing and logistics studies, and so they were forced to perpetuate the same mistakes, and so perpetuate the small margins.

It is not the purpose of this report to serve as a manual for export marketing studies, but insofar as they bear on the cost of transportation, the following points require consideration:

1. **The product.** As mentioned, the ability to produce a product is no automatic qualification for a place in world markets. Any new product places an additional demand on the transportation system. Under some circumstances increased demand helps reduce the transportation cost. In many others it only serves to put the cost up--for all the users. Thus an export product unwisely chosen may not only be unprofitable, but it may also serve to make other products unprofitable. As an example of this phenomenon we would give the case of a new exporter of perishable products demanding refrigerated containers at a time of existing peak demand. In this situation, while the charge for the containers will not necessarily increase, when the quantity of containers is relatively fixed, loss will be experienced by some producers in their being unable to acquire containers.

2. **The volume or quantity.** All other factors being equal, the per ton cost of transport can be reduced if the quantity shipped is increased. There is a distinction that has to be made between increased marginal demand, where costs can be increased, and true bulk handling. One additional producer, acting as an individual in demands for transport, is a user at the margin--even if the product being shipped is the same one being shipped by all the others. Where a significant volume can be handled at any given point in the transportation chain, and where there is one representative of the shipper and one representative of the carrier, then the nature of the transportation changes and the costs can be negotiated downwards. As an example of this one can look

at the pineapple situation in Costa Rica: a number of small producers have entered the export market, and a major fruit company has planted a massive acreage. The individual producers are producing at the margin and will eventually push up the cost of transport; the major company has chosen the quantity so that fleets of trucks can be contracted and refrigerated ships can be chartered. The pineapples from the two groups of producers are destined for the same markets; the price demanded by the major producer will set the price for the smaller producers.

3. **Origins and destinations.** The discipline of transportation logistics requires complex analysis. The main objective of the exercise is to make the margin remaining for the exporter as large as possible. The analysis involves the balancing of quantities, times, different markets, alternative transportation modes, and mixes of products until the maximum margin has been identified. In the case of El Salvador the main exporting market was the USA; it was normally assumed that exports meant sending to the USA. When exporters were asked if they had investigated markets further afield it was found that they had not. One of the main advantages that El Salvador has over other countries is its Pacific Ocean access: to export from this country to the east coast of the USA is to ignore a major potential. It is not inconceivable that markets exist for Salvadoran products as far away as Australia and the Middle East. Interviewees tended to consider transportation costs to such regions as prohibitively expensive, without

considering whether local prices obtainable for Salvadoran products might not justify the extra cost. Where there is a considerable amount of one-way traffic, bargains may be struck by providers of cargo in the return direction: there is an established Far East connection for imports by way of Acajutla, though very little gets picked up. It might be possible to arrive at a creative negotiation by supplying cargo for these vessels so that they could return directly to the Far East. The transportation cost to cross the Pacific can, under the right circumstances, be less than the cost to ship to the USA.

4. **Marketing.** Selling anything in the USA is a difficult and potentially expensive exercise. Selling basic food commodities--fruits and vegetables--is not less difficult than for manufactured items. Basic foods are difficult to differentiate as to origin, and so it is hard to establish any brand loyalty. The major fruit companies have managed to produce just the right shape, size, and consistency of banana, for example, to capture the optimum market, and in doing so have even managed to associate brand names with the fruit. The cost of the required research and development has been huge, and the continuing promotion also consumes considerable funds each year. There is now considerable effort being expended in trying to put labels on all fruit and vegetables, and for the companies that do this to promote their product by name. The competition in this field is fierce, and fruit and vegetable growers without the resources for this type of promotion will find it hard to establish themselves in the market. Salvadoran

exports are indistinguishable from all the same exports from the rest of Central America and the Caribbean. This means that the first country that promotes its products on a national basis, and can produce a consistent range of products that are considered desirable by the US consumers, this country will stand to corner a large part of the market. Even at the level of the individual exporter, much can be done to increase margins by targeting the product and its package to the intended consumer. Exporters have to realise that selling in the USA is not a larger version of selling to El Salvador.

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CHAPTER 5

RECOMMENDATIONS

RECOMMENDATIONS SUMMARIZED

The recommendations which emerge from analysis of the previous chapters are listed here under the headings of "physical" recommendations and "institutional" recommendations. The first group requires the use of funds to construct or improve items of infrastructure, while the second requires a program to bring about changes in operation, environment, or legislation to effect an improvement in the use of transportation.

Only those items that could be considered on a national basis are considered. Those matters that are best handled at the regional level are discussed more fully in the regional report.

The recommendations listed are then reconsidered and prioritized in the final sections of this chapter. The way in which the benefits for the various prioritized recommendations are computed is contained in Appendix B to this report.

Physical Recommendations

- o improve the level of road maintenance for those sections of roads between production areas and nearest ports and airports

- o procure and install an additional 15 electrical hookups for the port at Acajutla to enable it to provide better service for refrigerated containers
- o construct and put into operation of strategically located container freight stations and refrigerated warehouses. Requires study to determine location, size, and recommendations for appropriate operation system.

Institutional Recommendations

- o formulate and introduce a simplified procedure at frontiers with Guatemala and Honduras that will reduce customs delays
- o standardize existing trucking legislation to permit freedom of movement between El Salvador, Guatemala and Honduras
- o formulate and introduce a simplified system for entering into and settling contracts
- o formulate and introduce a legal code that would permit the introduction of export brokers
- o negotiate with the government of Honduras to obtain removal of the "vigilancia" charge
- o review the current situation regarding availability of customs and USDA inspectors at Gulf ports. Develop and implement a program to make up this deficiency
- o assist with setting up legally constituted bodies for exporters

- o make available reasonably priced insurance for carriers
set up and run seminars in better business practices for
managers of trucking companies
- o set up and run schools for truck drivers and mechanics
- o set up and run schools for port equipment operators and
mechanics
- o set up Salvadoran representation office in Miami to check
arrivals and look for buyers
- o introduce and implement assistance programs for group
problem solving
- o set up a national marketing and promotional organization,
particularly for exports that would increase use of
Acajutla.

PRIORITIZED PHYSICAL RECOMMENDATIONS

1. Review of Road Repair and Maintenance

The nation's roads were determined to be in need of improved levels of maintenance. The determination of the investments needed to improve surfaces at a detailed level was beyond the scope of this study: El Salvador has existing maintenance programs, has established its own level of efficiency, and could

use different combinations of private and public sector contracting. Before a program could be introduced it would first be necessary to review current levels of capability--reviews of public sector equipment and personnel, the condition of the equipment, the condition of repair and maintenance facilities, and so on--to determine the skills and facilities that are lacking. An immediate study with a budget of \$300,000 would be able to review the situation and propose programs for improvements.

Land transport for non-traditional products absorbs about \$21 million per year. Of this, truck maintenance and repairs could account for \$3 million. Improved roads could benefit this figure by up to 10%, or \$300,000 a year. Non-traditional exports could be expected to increase by a possible \$1.5 million. This estimate, however, needs to be considered in the light of the fact that the greater percentage of roads covered are those of Guatemala and Honduras. Until those countries also improve their roads the benefits will be much less.

2. Container Freight Stations

A major impediment to consolidation of container freight was the absence of container freight stations. It is therefore recommended that a program of construction of strategic container freight stations be undertaken. The first step in the program would be the construction of one station in the vicinity of the port of Acajutla. A review of the demand would be required for the precise dimensions to be determined. The port authority, CEPA, would be able to administrate this facility.

For this study it has been assumed that 4,000 containers per year would use the container freight station initially. This quantity would require a ten-door facility of about 60 x 45 meters. The facility would also require a considerable amount of land for parking (say 5 hectares) services, equipment, and so on. A budget of \$1.2 million for the facilities is recommended. Benefits would result from an effective reduction in road, port and sea freight costs, possibly an effective \$500 on the 4,000 using the facility. Total annual benefit would be \$500 on each of 4,000 containers, or \$2.0 million, resulting in increased value of exports of \$10 million.

3. Refrigerated Warehouses

As with the container freight stations, a serious impediment to the increased export of perishable products was the absence of refrigeration facilities. Unlike container freight stations, refrigeration facilities are needed within a short distance of the harvest areas, and cannot just be constructed near the port or the capital city.

Refrigerated warehouses are expensive items, and require careful studies to determine demand, sizes, compartments, power, location and so forth. Such studies were outside the scope of this investigation. The study might take 4 months and cost of the order of \$400,000.

The benefits could include a more efficient use of refrigerated containers and an increase in exports of perishables. Total increased exports would be of the order of \$2.0 million per year. As with the container freight station, CEPA could administer the facility.

Recent developments in the agricultural processing field are showing that smaller mobile freezer units are more efficient than the static refrigerated warehouses. The problems of refrigerated containers would be solved using either fixed or mobile units, so it is recommended that the initial study investigate both. If the mobile units prove to be more efficient, it would be more worthwhile to encourage the private sector to invest in the system.

Non-Priority Recommendations

The provision of the 15 additional electrical hookups for containers at Acajutla has not been included as a priority recommendation. At present time, so little of the non-traditional exports requiring refrigerated containers passes through Acajutla that the small related benefit would not justify the expense.

PRIORITIZED INSTITUTIONAL RECOMMENDATIONS

1. Contract Law Amendments

The export of non-traditional products is not likely to become a major and permanent force in the economy of El Salvador unless the risks of doing business can be apportioned by contracts. Contracts are fundamental to transport, and if these can be entered into easily, and if disputes arising can be resolved cheaply and consistently, then many of the other problems relating to transport in the country would be resolved automatically. At the time of the study there was found to be a definite risk involved in cooperating for business purposes.

It is therefore recommended that a program be formulated to review the status of contracts in the country and determine how a contractual simplification process can be set in operation. It is envisaged that a tribunal or arbitration system could be set up under the existing judicial system specifically to deal with certain classes of contract. Since such a program was outside the experience of the project team, no attempt was made to estimate the cost. The benefits would take the form of a steady year-by-year increase in non-traditional exports. At a reasonable minimum of a 2% increase in sales per year attributable to increased cooperation, the benefit would be of the order of \$8 million increase each year.

While a complete overhaul of the nation's contract law would clearly be a long-term project, improvements and clarifications were determined to be possible over the short term. These included:

- o the introduction of contracts of carriage. A simple form should be introduced that would enable a shipper and a carrier to enter into agreement regarding date, quantity, and cost. The penalties for default should be unambiguous and should be easily collectable. The benefit would be that the carrier could plan his operations well ahead of time to provide the most economical service. As a long-term goal, since such a measure would benefit both truckers and steamship companies, a reduction of up to 10 percent in transportation costs could be achieved.

o the formation of exporters' groups. It is recommended that a negotiating team be set up to acquire preferential rates for members of the groups. While the organization of such groups can be easily thought out, a weakness always lies in the contractual arrangement between the group and the members: without commitment on the part of the exporters, the negotiators would find themselves looking for tariff deals without any assurances of volume. Again, it is recommended that a program be followed to determine the best legal structure that would permit a management group to bargain on behalf of prospective exporters. The potential for freight negotiations is quite considerable, and could reduce the transport cost by up to 25 percent, particularly if volumes could be increased.

o transportation brokerage. In the absence of appropriate legal remedies, the services of transportation brokers are almost unknown. These services, however, would be essential if full advantage were to be taken of the contract law revisions: brokers are traditionally the ones who take advantage of the difference between regular rates and bulk rates. It is therefore recommended that, as part of the contract law amendment program, a legal framework be established for the operations of brokers.

2. Overseas Representation

It is recommended that an overseas regional office be set up in, say, Miami to:

1. Inspect shipments arriving to certify condition etc.
2. Determine and investigate better markets and buyers for the nation's products.
3. Train nationals of El Salvador in the practice of international trade, with the possibility that some trainees may take over the role of brokers.

The costs and benefits of this proposal come to cost of \$300,00 per year and increased exports at not less than \$2 million.

The representation could be established in the very short term.

3. Group Problem-Solving Assistance

A major weakness in El Salvador was seen to be the lack of experience in group problem-solving techniques. An improvement in this field, when taken with the previous recommendations, could put all the factors in place for genuine improvements to the problems of non-traditional exports.

It is therefore recommended that experts in this field be contracted to train a seed group of individuals in the processes of logical problem definition, consideration and selection of solutions, strategy formulation, and implementation programming. Costs would be about \$300,000 per year, for, say, three years, and benefits would be derived from measuring successes with specific problem areas.

4. Removal of Export Tariffs

The imposition of export taxes on non-traditional products was a clear constraint to the successful marketing of these products overseas. Removal of the taxes, while of great benefit to the individual exporters, would be of little loss to the Treasury since the volumes are so small. It is therefore recommended that an agreed list of non-traditional exports be drawn up that would be exempt from export taxes. Removal of an average of 2% on the FOB total of \$226 million would put \$4.52 million into margin, and could result in an increase of sales of about \$23 million.

5. Education Programs

It is recommended that education and courses be made available to all those involved in the export process. This is not to take away from any of the education programs currently implemented their due recognition, but rather to recommend that they be supplemented by:

- o A training program for truck drivers. It is recommended that a school for Salvadoran truck drivers be set up in San Salvador. This should be a collaborative project between the Salvadoran trucking companies, manufacturers of trucks, and an enabling agency such as USAID. The aim of the school would be to turn out drivers who were aware of the role that they play in the trucking industry, and how correct driving habits can lead to more efficient use of equipment. The graduates of the course would receive a diploma that would be recognized as a sign of superior ability. The cost of such a school would depend to a great extent on how much assistance could be found from the major equipment manufacturers.

- o A training program for mechanics. It is recommended that a school for Salvadoran mechanics be established in San Salvador under the same arrangement as the drivers' school. The aim of the course would be, not only to teach mechanics the details of repair and maintenance of heavy equipment, but also to demonstrate how to recognize and measure the results of a successful maintenance program. Again, graduates would receive diplomas of competence. The cost of buying equipment for and setting up such a school could easily reach \$2 million, but as with the drivers' school, assistance is available from equipment manufacturers.

- o A training program for managers of trucking companies. It is recommended that a series of seminars be arranged for the managers or would-be managers of trucking companies. The purpose of the seminars would be to introduce ideas for improving efficiency of operations. In the long term it is expected that such a class, correctly conceived and executed, could end up in significantly reducing empty back-hauls, and thus cut the cost of trucking by half. A more realistic estimate would be a 15% reduction in trucking costs through generally improved managerial practices. The speakers would have to be recognized experts in the field, and should clearly be able to deliver the seminar in Spanish. An annual budget of \$75,000 would be sufficient for six speakers per year. If the speakers could visit more than one country, then the per-country cost would be less. A training program for port managers could be run on the same lines.

6. Increased Number of Inspectors in US Ports

A major item of cost for the average non-traditional export is the cost of maritime transport. Any program that reduces this cost can have a significant effect on increasing exports. The shipping lines complained that there was a shortage of US Customs and Department of Agriculture inspectors at US ports, and that this shortage was contributing to the costs of their operations.

The shortage of inspectors at US ports has an effect on transport costs that is not strictly determined from the model of Appendix B. The costs arise from added deterioration of the perishable products, the waiting time of truckers at the US ports before consignments are available, the tying up of shipping line personnel in waiting, and the accumulation of storage charges. Thus, in the first instance, the cost is born by several groups; ultimately, however, all costs of transportation are paid by the exporter, so in the long term the exporter will benefit from any improvements. If, by the introduction of additional inspectors, the average waiting time of the estimated 8,000 trucks required to haul Salvadoran products in the USA could be reduced by 45 minutes, the annual saving for non-traditional products would be of the order of \$600,000, with potential export increases up to \$2 million.

It is recommended that a program be established to investigate how the current shortfall can be made up, though it is known that the regional shipping lines are already bringing pressure to bear to resolve the issue.

7. National Marketing Organization

There is a clear need in El Salvador for a well-funded and well-directed marketing organization. The main priority for this organization would be to find markets for the products of El Salvador on the west coast of the United States, the Canadian west coast and in the Far East--any area that would ensure greater throughput at the port of Acajutla. The organization would split its functions between active overseas promotion on a national basis, and analysis and investigation of potential markets.

It is therefore recommended that promotional and marketing assistance be given to El Salvador by the hiring of an existing firm of US marketing specialists. This firm should be given clear objectives, against which its success would be measured, and the budgets would be agreed beforehand. As a normal rule-of-thumb, private sector enterprises spend 3% of annual income on marketing and promotion each year - particularly when competition is fierce. In the case of El Salvador this would amount to \$18 million per year. It is recommended, however, that expenses be restricted to 8% of targeted increases in exports of non-traditional products. It is thus recommended that a target of 3% annual increase in non-traditional exports be established, or about \$12 million increased sales each year. This should be achieved through a marketing and promotional budget of 8%, or \$960,000.

It is further recommended that both the target and the budget be increased to include traditional exports and possibly tourism.

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APPENDIX A

ECONOMY AND TRADE

ECONOMIC OVERVIEW

Between 1979 and 1983, El Salvador's output dropped by cumulative 22 percent, with real GDP in 1983 falling to the level of 1974. This contraction affected virtually all sectors of the El Salvadoran economy, especially manufacturing, construction, commerce and agriculture, and stemmed largely from a continuation of armed conflict since 1979, the contraction of the Central American Common Market and world-wide recession. This pattern reversed itself in 1984 with the economy showing a very weak recovery of approximately 1.5% growth in real GDP.

However, the earthquake which struck the capital, San Salvador, on October 10, 1986, provided another serious economic setback. The death toll was over 1,000 and some 200,000 were rendered homeless with the poorest areas being the worst affected. The extent of the damage revealed the poor construction of many buildings erected since the last earthquake struck the capital in 1965. The government initially put the cost of reconstruction at between \$500 million and \$2 billion but soon after adopted the upper limit. This is equivalent to the total of US aid to El Salvador (economic and military) since 1980. Although some sources question the government's estimates, even finding the lowest figure of \$500 million would represent a major challenge.

The rate of inflation is currently estimated at over 22% in 1986 in part reflecting the devaluation of the colón. Unemployment has risen to around 30% compared with 4% in 1978. El Salvador's balance of payments deteriorated slightly in 1985 with the deficit on the merchandise trade account increasing from \$251 to \$268 million primarily due to an expansion in imports. Coffee continued to be the predominant source of foreign exchange earnings (\$453 million out of \$752 million), followed by cotton (\$38 million), sugar (\$35 million), and shrimp (\$21 million).

The economy was estimated to have grown 1.8% (real GDP) in 1986 with a slow down in the manufacturing growth rate to 2.6% being in part compensated for by positive growth in the agricultural sector (1.2%). The devaluation of the colon from C/2.5=\$1.00 to C/5.0=\$1.00 is expected to slow the recent growth in merchandise imports. Also, the recent increase in coffee prices is expected to increase foreign exchange revenues, thereby facilitating a reduction in the deficit on the merchandise trade account from \$268 million to \$226 million. This devaluation will however raise the internal cost of consumer goods and durables and result in increasing pressure on prices. Inflation was estimated to be 20% through 1986. A higher rate may be observed depending upon the success of price controls and efforts to reduce governmental expenditures, tighten credit and slow wage rate adjustments.

The ability of El Salvador to sustain the positive growth rates experienced during the last three years will continue to be dependent on U.S. assistance levels. Although the recent increase in coffee prices and fall in oil prices will facilitate an improvement in El Salvador's trade account, the provision of balance-of-payments support through the provision of economic support funds, PL-480 Title I and development assistance is critical to maintaining the flow of imported food stuffs and raw materials. Currently, U.S. assistance levels in the short term are expected to decline in comparison with previous years, (\$432.2 million) in part reflecting a tightening of the world-wide U.S. foreign assistance budget and in part El Salvador's improving balance-of-payments situation.

AGGREGATE ECONOMIC ACTIVITY

Employment

El Salvador's economy has slowed since the advent of armed conflict in 1979, resulting in high unemployment. Of a total population estimated at 4,767,570 persons in 1985, the country's labor force represented 1,757,233 persons. The rate of unemployment, which stood at 3.7 percent in 1978, rose to 14.2 percent in 1980 and was estimated at 30.0 percent in 1983, the latest year for which data are available.

Table A.1
El Salvador
Unemployment Rates

<u>Year</u>	<u>Percent of Labor Force</u>
1978	3.7%
1979	n.a.
1980	14.2
1981	30.2
1982	35.0
1983	30.0 est.
1984	n.a.
1985	n.a.

n.a. = not available

Source: American Chamber of Commerce of El Salvador

Inflation

The rate of inflation in El Salvador accelerated from 8.7 percent in 1979 to 17.3 percent in 1980. After moderating somewhat to 11.7 percent in 1984, consumer prices rose 22.3 percent during 1985.

Table A.2
El Salvador
Consumer Price Index

<u>Year</u>	<u>Price Index</u>	<u>Percent Change</u>
1978	100.0	
1979	108.7	8.7
1980	127.5	17.3
1981	146.4	14.8
1982	163.6	11.7
1983	185.1	13.1
1984	206.7	11.7
1985	252.9	22.3

Base - December 1978

Source: American Chamber of Commerce of El Salvador

Economic Growth

Following a decline in terms of constant dollars through 1983, real Gross Domestic Product (GDP) recovered 1.5 percent in 1984 and advanced another 1.6 percent during 1985. In 1986, real GDP is estimated to have grown by 1.8 percent. Accounting for population increases, this modest level of economic growth has been sufficient to stabilize GDP, which gained 0.4 and 0.5 percent during 1984 and 1985 respectively and is estimated to have declined 0.1 percent in 1986.

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Table A.3
El Salvador
Key Economic Indicators
(\$millions, \$1=2.5 colones)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986*</u>
GDP	3,458.5	3,586.5	4,036.7	4563.9	5,606.4	3,610.6
Per Capita GDP	755.7	775.5	863.8	966.4	1,174.7	742.0
<u>%change</u> Real GDP	-8.3%	-5.6%	-0.8%	1.5%	1.6%	1.8%
Real GDP Per Capita	-9.2	-6.7	-0.2	0.4	0.5	-0.1

* estimated, \$1=5.0 colones

Source: Central Reserve Bank of El Salvador, Feb. 1986

In terms of individual economic sectors, growth in construction (12.0 percent) manufacturing (4.5 percent) and utilities (4.0 percent) led the recovery during 1985, as shown in the following table. Agricultural output, which declined 2.4 percent in 1985 is anticipated to stabilize with a 1986 advance of 1.2 percent.

Table A.4
El Salvador
Relative Annual Variations of the Gross Domestic Product
at Constant Prices of 1962 (Percentages)

<u>Sectors</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985 (p)</u>
Field crops & livestock	- 6.4%	- 4.7%	- 3.2%	- 1.2%	- 2.4%
Coffee	- 6.6	- 0.8	-10.6	- 6.5	- 3.0
Cotton	-29.8	- 8.1	1.7	-22.8	-20.4
Sugarcane	-11.7	4.8	27.1	12.8	6.5
Basic Grains	- 5.9	-15.8	7.8	20.8	- 8.9°
Others	- 1.3	- 4.0	- 3.0	2.8	2.0
Mining & Quarries	- 2.1	- 1.3	- 1.3	2.7	--
Manufacturing Industry	-10.4	- 8.4	2.0	1.3	4.5
Public & Private Construction	-15.3	- 4.2	2.0	- 5.7	12.0
Electricity, Water, & Sanitary Services	- 3.1	- 2.5	5.0	2.7	4.0
Transport, Storage, & Communications	-10.9	- 6.5	6.0	2.8	2.7
Commerce	-14.9	-12.0	2.8	1.9	2.0
Financial	- 9.3	5.8	0.2	1.0	3.0

(p) provisional figures

Housing Ownership	2.9	2.7	2.0	1.6	1.5
Public Administration	1.2	3.0	1.0	3.0	0.5
Personal Services	<u>- 8.6</u>	<u>-11.5</u>	<u>0.5</u>	<u>1.0</u>	<u>2.5</u>
Gross Domestic Product	- 8.3%	- 5.6%	0.8%	1.5%	1.6%

Source: Central Reserve Bank of El Salvador, February 1986

Industrial Origin of Gross Domestic Product

As shown in Table A.5, commerce accounted for approximately one quarter of El Salvador's total gross domestic product during 1984 ahead of agriculture (20.6 percent), manufacturing (15.5 percent), and public administration (11.1 percent). Transportation and communications represented 4.2 percent of total GDP in that year.

Composition of GDP, measured in monetary value, tends to understate the prominence of agriculture in El Salvador and other nations of the region. There is an agricultural component in nearly every sector of the economy including industry, transportation, public administration and finance. Directly, agriculture employs approximately 40 percent of El Salvador's labor force, but including all agriculture-related activities, accounts for more than half of total employment.

Nevertheless, agriculture is slowly becoming less dominant in El Salvador's economy over time. Since 1979, when agriculture represented 29.1 percent of GDP, the proportion of total economic activity in commerce, public administration personnel services, housing rents and transportation have grown.

Table A.5
El Salvador
Gross Domestic Product by Industrial Sector

<u>Industrial Sector</u>	<u>1984 Percent of GDP</u>
Commerce	25.6%
Agriculture	20.6
Manufacturing	15.5
Public Administration	11.1
Personal Services	8.3
Housing Rents	5.4
Transport & Communications	4.2
Financial	3.4
Construction	3.2
Water & Electricity	2.5
Mining	0.2
Total	100.0

Source: American Chamber of Commerce of El Salvador

MAJOR ECONOMIC SECTORS

Agriculture

The agricultural sector contributes about one fourth of all GDP, employs approximately 40 percent of the labor force, and makes up about two thirds of the total value of all exports. The economic health of this sector is one of the keys to creating income generated demand for production from other sectors of the economy. Regrettably it has also been the sector which has failed to improve its performance despite repeated governmental efforts.

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In regard to the agricultural sector, a slightly lower 1985-86 grain crop and a continued decline in the domestic cotton crop combined to yield a negative overall growth for the agricultural sector of 2.4 percent. Although the sector is forecast to register positive growth in 1986 (1.8 percent), the outlook is not encouraging. The 1985-86 coffee crop which was harvested between October 1985 and February 1986 is currently believed to be roughly 20 percent lower than the previous years' crop. This shortfall in quantity terms will be compensated for by high international prices, thus providing the basis for positive growth in GDP terms. Similarly, the outlook for sugar and cotton is not bright, with production expected to stagnate or decline.

El Salvador continues to import significant quantities of agricultural commodities from the United States. The total value of all agricultural commodities imported from the U.S. decreased slightly from \$100 million to \$94 million between 1984 and 1985. Oilseeds and products accounted for over a quarter (\$32.8 million) of the total value of all agricultural imports from the U.S. Grains and feed (\$31.5 million), principally wheat (\$22 million equivalent, 151,190 tons), were second in terms of importance followed by tallow (\$15.3 million). All these imports have been financed either under the PL-480 program or under the GSM-102 three year credit guarantee program.

Table A.6
El Salvador
Production of Principal Agricultural Commodities

<u>Commodity</u>	<u>Crop Year</u>	<u>1983-84</u>		<u>1984-85</u>		<u>1985-6</u>	
		<u>Area</u> (h)	<u>Prod.</u> (m)	<u>Area</u> (h)	<u>Prod.</u> (m)	<u>Area</u> (h)	<u>Prod.</u> (m)
Coffee	Sept- Oct	185,500	2,400,000*	185,500	2,840,000*	185,500	2,300,000*
Corn	July- June	241,051	436,950	242,938	502,000	241,500	489,885
Sugar	Oct- Sept	34,000	240,000	36,000	264,000	36,000	277,000
Cotton	Aug- July	36,682	30,228	37,241	31,000	28,000	23,500
Oranges	Jan- Dec	4,891	97,796	4,961	98,548	5,180	102,899
Sorghum	July- June	110,395	121,432	115,984	139,000	116,200	127,007
Beans	July- June	56,245	41,654	57,643	47,899	56,000	34,074
Tomatoes	Jan- Dec	1,712	25,782	1,747	26,535	1,732	26,307
Rice	July- June	12,577	27,000	15,301	39,347	15,400	42,139
Cocoa	Jan- Dec	5,590	72,576	5,590	78,382	5,600	78,000
Pineapple	Jan- Dec	1,118	18,144	1,188	19,277	1,323	21,000
Water- melon	Jan- Dec	2,795	61,508	3,563	77,728	2,800	61,083
Yuca	Jan- Dec	1,817	22,997	1,886	27,678	1,820	26,709
Tobacco	Feb- Jan	925	1,094	710	894	688	754
Cashews	Jan- Dec	2,795	2,195	2,795	2,195	2,870	2,254

h=Hectares
t=Metric Tons

* 60-kg. bags

Source: Foreign Agricultural Service, US Department of Agriculture

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Mining

El Salvador's mineral resources are varied but reserves are limited. Gold, silver, copper, sulphur, mercury, lead, zinc, salt and lime can be found. Only gold, silver and limestone deposits are presently exploited. At present, mining represents less than 1 percent of the nation's total Gross Domestic Product.

Energy

El Salvador produces a net surplus of electricity. Hydroelectric power accounts for 62.7 percent of total energy production, while geothermal represents an additional 14.4 percent, and dependency on oil is limited to 22.9 percent. Petroleum imports accounted for only 13.3 percent of El Salvador's total imports in 1984.

Table A.7
El Salvador
Electric Generation and Consumption
(millions of KWH)

	<u>Generation</u>	<u>Consumption</u>	<u>Surplus</u>
1973	912.1	802.4	109.7
1975	1,059.2	941.0	118.2
1978	1,487.6	1,311.6	176.0
1981	1,511.7	1,322.5	189.2
1982	1,489.3	1,289.2	200.1
1983	1,600.5	1,354.3	246.2
1984 (p)	1,671.5	1,415.3	256.2

(p)--preliminary

Source: American Chamber of Commerce of El Salvador

Manufacturing

One of the more industrialized countries in Central America, an estimated 135,380 industrial enterprises (not including farmers) are operating in El Salvador.

Textiles, clothing and food processing are the most important industrial activities. Most industrial enterprises are small and are located near the capital. Manufacturing output has dropped sharply in the last few years due to internal strife in the nation and the scarcity of foreign exchange for machinery, equipment and raw materials.

Tourism

Due to negative public perceptions of political instability as well as damage caused by the recent earthquake, tourism has virtually halted in El Salvador.

CURRENCY AND FOREIGN DEBT

El Salvador continues to run a significant deficit on its merchandise trade account with imports (\$1,020.0 million in 1985) outweighing exports (\$752.0 million) by nearly \$270.0 million. The recently announced economic stabilization package which passed nearly all imports and exports over to the parallel market rate (5.00 colones = \$1.00 US) from the official rate (2.5 colones = \$1.00 US) should help to slow growth in merchandise imports (.6

and 4.4 percent in 1984 and 1985, respectively). Nevertheless, this action has created inflationary pressures on consumer prices (20% per anum) which in turn has led to growing labor discontent and demands for wage rate reform. In an effort to control inflation, the Government of El Salvador has imposed selective price controls, tightened credit and taken action to reduce the internal deficit by raising more revenues through increased taxes and by cutting governmental expenditures. Most of these actions were included as part of an overall economic stabilization package which was announced by President Duarte on January 21, 1986.

Table A.8
El Salvador
Colon Exchange Rate
(colones per US dollar)

<u>Date</u>	<u>Official</u>	<u>Authorized Parallel Market</u>	<u>Black Market</u>
April 1985	2.50	3.95	4.05
March 1985	2.50	4.10	4.90
January 1986	5.00	Unauthorized	5.60

Source: American Chamber of Commerce of El Salvador

The nation's total public debt has jumped by a multiple of 5 times, from \$US 341.2 million in 1979 to nearly \$US1.8 billion in 1985. As indicated previously, both internal armed conflict and the 1986 earthquake have placed heavy demands on government finances in recent years.

Mirroring the dramatic rise in total public debt, foreign public debt increased from \$US 260.9 million in 1979 to \$US 915.1 million by 1985--a multiple of 3.5 times. Service of external debt accounted for 46 percent of the total value of El Salvador's exports as of 1984, the latest year of which data is available.

Table A.9
El Salvador
Public Debt
(end of year, millions of \$US)

<u>Year</u>	<u>Foreign</u>	<u>Internal</u>	<u>Total</u>
1977	152.8	33.7	186.5
1978	205.9	49.5	255.4
1979	260.4	80.8	341.2
1980	341.2	216.4	557.6
1981	446.2	454.8	901.0
1982	487.0	644.1	1,131.1
1983	622.1	760.2	1,382.3
1984	815.0	821.5	1,636.5
1985	915.1	868.4	1,783.5

Source: American Chamber of Commerce of El Salvador

Table A.10
El Salvador
Private Sector External Debt
(millions of \$US)

1978	\$468.8
1979	347.7
1980	229.2
1981	216.8
1982	193.3
1983	184.4
1984	185.8
1985	n.a.

n.a. = not available

Source: American Chamber of Commerce of El Salvador

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Table A.11
El Salvador
External Debt Service as a Percentage of Exports

<u>Year</u>	<u>Percent of Total Exports</u>
1979	36%
1980	41
1981	44
1982	44
1983	32
1984	36
1985	n.a.

n.a. = not available

Source: American Chamber of Commerce of El Salvador

Total U.S. economic assistance to El Salvador has increased significantly since 1980 when \$72.6 million was disbursed, to \$222.9 million and \$432.2 million in 1984 and 1985, respectively. The budget for 1986 was \$312.0 million, of which \$81.1 million, \$177.0 million, \$46.0 million, and \$7.9 million, were earmarked for development assistance, economic support funds, P.L. 480 Title I, and P.L. 480 Title II, respectively. In the past, economic support funds have been used for direct balance-of-payments support, while the development assistance budget has been used to finance an array of projects in such areas as industrial recovery, health, judicial reform and public service restoration. A major portion of this assistance continues to be directed to support the agrarian reform sector.

Table A.12
El Salvador
U.S. Economic Assistance
(\$ million)

<u>Type of Program</u>	<u>FY1981</u>	<u>FY1982</u>	<u>FY1983</u> ¹	<u>FY1984</u>	<u>FY1985</u> ²	<u>FY1986</u> ³
(DA) Development Assistance	33.8	36.8	58.9	41.4	91.1	81.1
(ESF) Economic Support Funds	44.9	115.0	140.0	120.2	285.0	177.0
PL 480, Title I	26.2	19.9	39.0	49.0	49.0	46.0
PL 480, Title II	9.1	7.7	21.5	5.3	7.1	7.9
HIG Guarantees	5.5	5.0	5.0	--	--	--
Refugee/Disaster Relief Program	<u>2.3</u>	<u>6.2</u>	<u>2.5</u>	<u>7.0</u>	<u>--</u>	<u>--</u>
TOTAL	121.8	190.6	266.9	222.9	432.2	312.0
CCC Guarantees (GSM-102)	30.0	21.3	25.5	37.5	21.0	8.2

¹ Title II, Section 206 Program is included, Sales Value of NFD Milk \$16.0 Million, cost to U.S. \$1.4 million.

² It includes FY-84 Supplement which was obligated in FY-85 (ESF \$90.0 Million and DA \$21.1 Million).

³ Planned.

Source: U.S. Embassy in El Salvador, February 1986.

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FOREIGN TRADE

The following information is intended to serve as a summary of the foreign trade situation in El Salvador. More detailed analysis of selected export products is contained in Chapter 3.

As shown in the following table, El Salvador has run a balance of payments deficit on current account since 1981. In 1985 this current account deficit totaled US\$ 50.9 million, down from US\$ 91.7 million in 1984. The country's balance of payments is estimated to have improved to a surplus of US\$ 161.3 million in 1986 due to a variety of factors. These include an increase in the value of exports resulting from an increase in coffee prices--the country's leading export--as well as a slowdown in imports resulting from devaluation of the colón and other elements of the new economic stabilization program. Debt service payments are more than matched by remittances from Salvadoreans living abroad and transfers from the US administration.

Table A.13
El Salvador
Balance of Payments
(millions \$US)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u> ¹	<u>1986</u> ²
<u>Merchandise Exports</u>	<u>\$798.0</u>	<u>\$699.6</u>	<u>\$743.6</u>	<u>\$725.8</u>	<u>\$752.0</u>	<u>\$773.7</u>
Coffee	452.6	402.6	410.5	449.8	452.6	480.0
Cotton	53.6	45.2	55.4	9.1	38.4	5.0
Sugar	14.8	15.9	40.1	25.9	35.0	27.8
Shrimp	16.0	18.2	13.8	20.2	21.1	28.0
Non-traditional	260.9	217.7	223.9	220.9	204.9	232.9
<u>Merchandise Imports CIF</u>	<u>-984.6</u>	<u>-856.8</u>	<u>-891.5</u>	<u>-977.4</u>	<u>-1,020.0</u>	<u>-1000.1</u>
<u>Trade Balance</u>	<u>-186.6</u>	<u>-157.3</u>	<u>-147.9</u>	<u>-251.4</u>	<u>-268.0</u>	<u>-226.2</u>
<u>Services, Net</u>	<u>-108.9</u>	<u>-170.0</u>	<u>-164.6</u>	<u>-160.3</u>	<u>-143.0</u>	<u>-116.8</u>
<u>Transfers, Net</u>	<u>80.8</u>	<u>207.4</u>	<u>271.5</u>	<u>320.2</u>	<u>360.1</u>	<u>504.3</u>
<u>Balance on Current Accounts</u>	<u>-214.7</u>	<u>-119.8</u>	<u>- 41.0</u>	<u>- 91.7</u>	<u>- 50.9</u>	<u>161.3</u>

¹ Preliminary
² estimated

Source: Central Reserve Bank of El Salvador, January 1986

Traditional exports from El Salvador include coffee, cotton, sugar and shrimp. Coffee alone accounted for \$US 452.6 million--or 60 percent--of the nation's export earnings totalling \$US 752 million in 1985. All categories of non-traditional exports together were valued at \$US 204.9 million in 1985--27.2 percent of total export earnings.

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APPENDIX B
ECONOMIC MODEL FOR BENEFIT ESTIMATES

In order to prioritize recommendations it is necessary to arrive at some estimate of benefits. Such a computation in the case of El Salvador, to be entirely valid, would require a degree of analysis that is beyond the scope of this study. Therefore a simplified model was adopted which, if used consistently, would at least enable the prioritization to be achieved. The assumptions that are basic to the model involve a great deal of aggregation and broad treatment, but the general results were found to be consistent with observations and experience within the country.

Since the focus of the study is on non-traditional products it was first necessary to abstract the value of non-traditional products for the region. The table "Non-Traditional Exports" shows that, of the \$752 million exported in 1985, approximately 70% could be classified as traditional and 30% was non-traditional. Thus the recommended improvements will be required to increase non-traditional exports over the \$226.0 million exported in 1985.

Table B.1
 El Salvador
 Non-Traditional Exports
 1985
 (\$million f.o.b.)

	<u>Total</u>	<u>Traditional</u>	<u>Non-Traditional</u>
El Salvador	752	Coffee 452.6 Cotton 38.4 Sugar <u>35.0</u>	226.0
TOTAL	752	526.0	226.0
Percentage	100%	70%	30%

Source: The Economist Intelligence Unit

The next assumption answered the question: if the 1985 non-traditional exports could be represented by a single product, what would be the cost breakdown associated with its exportation? It is clearly not sensible to consider that transport equipment and coffee would have the same cost profile, but since the country reports showed that the typical non-traditional export from the country was agricultural--mostly food--it was felt that the breakdown contained in the cost allocation table was sufficiently representative.

Of significance in the table is the fact that transportation can account for between 35 and 45% of the c.i.f. price of the product, and margins are typically 20 to 25%.

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Table B.2
El Salvador
Typical Export
Cost Allocation
1986

	<u>% of total</u>
Production cost	33-48%
Transport cost	35-45%
Admin. costs	2-4%
Margin	18-23%
Sale price c.i.f.	100%

Based on figures obtained for typical non-traditional agricultural export.

To determine the benefit of programs directed at improving the various transportation modes, it was necessary to assess the contribution of the modes to the total cost of transportation. Again, this process involved a considerable amount of aggregation of dissimilar items, but for comparative purposes the breakdown shown in the table "Transport Profile" was found to give results that were acceptable.

Table B.3
El Salvador
Typical Export
Transport Profile
1986

<u>Mode</u>	<u>% of total</u>
Land to port 1	12-16%
Port charges 2	2- 5%
Sea freight 3	65-75%
Port charges USA	<u>8-10%</u>
Total transportation	100%

Notes:

- 1 Includes collection from main production area and delivery to docks/de
- 2 Includes all charges payable to port authority, stevedores etc., allocated to cargo loaded
- 3 Includes vessel operating costs from CA port to USA port

The table entitled "Total Cost Profile" gives a cost profile of the typical export from El Salvador. It shows the approximate amount spent on each cost category in 1985.

The total value of transportation for non-traditional exports from El Salvador is of the order of \$154 million, with about \$96 million being spent on sea freight and about \$6 million being collected by the ports of Acajutla and Santo Tomás. The trucking industry accounted for about \$21 million.

About \$77 million was returned to the producers to pay for overheads and profit. This sum went to make interest payments, pay for depreciation, management, general equipment and so on, and what was left was profit.

If a recommended program manages to reduce transportation costs by 1%, or \$1.5 million, the margin is increased from \$77 million to \$78.5 million, or 1.9%. If the same cost profile is maintained overall, then a margin of \$78.5 million should support a total value of exports of about \$391.7, or an increase of \$7.5 million. On this basis there is about a 5 to 1 benefit to be obtained in non-traditional product exports for each percentage point decrease in the cost of transport.

Clearly, for the model to work accurately all other factors would have to remain equal: there would have to be no change in production cost, and rates of interest--a large component of margin--would also have to be unchanged. Throughout Central America forces are at work to reduce both these factors, in the face of which there is probably some small capacity to absorb increases in the cost of transportation. As this report shows, however, non-traditional exports are extremely sensitive to both economic conditions and cost of transportation, and factors that serve to reduce the amount available for margin also serve to reduce the total value of non-traditional exports.

Table B.4
El Salvador
Typical Export
Total Cost Profile

	<u>Percent</u>	<u>Value US\$ million</u>
Production cost	33-48%	136.4
Transport cost	35-45%	153.7
Land	5-6%	21.1
Port C.A.	1-2%	5.8
Freight	20-30%	96.0
Port USA	3-4%	13.4
Admin. Costs	2-4%	11.5
Margin	<u>18-23%</u>	<u>76.8</u>
Total c.i.f.	100%	\$384.2

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