

1 Outline of the Study

1.1 Background

The Republic of El Salvador has a population of about 5.6 million and covers an area of about 21,000km². Civil war broke out in 1979 and lasted until 1992 when the peace treaty was established. From thereon peace measures have been smoothly implemented and the economy has been growing steadily.

The Government of the Republic of El Salvador formulated the National Economic and Social Development Plan (1994-1999) in which promoting the improvement of the living environment is stipulated. In August 1994, the government prepared the "National Environment Improvement Plan", a master plan that covers all relevant environmental issues in El Salvador and underscores the criticality of environmental problems in the San Salvador Metropolitan Area.

For solid waste management (SWM) in the San Salvador Metropolitan Area, a sort of master plan was made with the financial support of the CIDA (Canadian International Development Agency). In 1998, PAHO (Pan American Health Organization) also conducted an analysis of the sector; this however only resulted in conceptualizations and did not involve concrete planning.

Based on this master plan, MIDES, that is established by COAMSS and a subsidiary in Barbados of the Canadian company CINTEC, is currently carrying out a project, which involves the operation of a section of a new landfill and the construction of a transfer station. However, because the project does not cover waste collection and the establishment of a management and supervisory system for the landfill and the transfer station, the formulation of an SWM master plan that focuses on these aspects is necessary.

Under these circumstances, the Government of El Salvador requested the Government of Japan to carry out a study on solid waste management in the San Salvador Metropolitan Area. In response to the request, the Government of Japan sent a Preparatory Study Team in April 1999 to confirm the necessity of the study and the counterpart agency in El Salvador. In September 1999, a JICA Preliminary Study Team was dispatched and the scope of work was signed and exchanged.

JICA selected and contracted with Kokusai Kogyo Co., Ltd., a Japanese consulting firm, to carry out this study.

1.2 Objectives of the Study

The study covers 14 municipalities in the San Salvador Metropolitan area, and aims to:

- Formulate a Master Plan on Regional SWM targeting the year 2010.
- Pursue technology transfer regarding SWM study and planning methods for the counterpart personnel.

1.3 Study Area

This Study will cover the following 14 municipalities under the jurisdiction of COAMSS:

San Salvador, Mejicanos, Ciudad Delgado, Cuscatancingo, Ayutuxtepeque, San Marcos, Nueva San Salvador, Antiguo Cuscatlan, Soyapango, Ilopango, San Martin, Apopa, Nejapa and Tonacatepeque.

1.4 Wastes Targeted

This Study will cover household waste, commercial waste, institutional waste, street sweeping waste and medical waste. Industrial waste will not be covered.

1.5 Target Year

The target year of the Master Plan is 2010.

1.6 Key Assumptions (Population, Economic, etc.)

The following assumption were used in this study.

1.6.1 Socio-economic Conditions

a. Population

Table 1-1 shows population forecast until 2010 in the Study Area.

Table 1-1: Population Forecast in the Study Area

Municipality	1999	2000	2005	2010
San Salvador	473,374	479,605	507,666	512,873
Mejicanos	185,204	189,392	207,153	217,248
Ciudad Delgado	149,394	153,350	170,014	180,727
Cuscatancingo	90,079	94,062	111,011	125,618
Ayutuxtepeque	28,000	29,663	36,700	43,005
San Marcos	69,660	70,610	74,864	76,106
Nueva San Salvador	138,723	144,025	171,584	197,690
Antiguo Cuscatlan	42,773	45,123	58,273	72,950
Soyapango	283,598	285,286	294,604	309,772
Ilopango	127,434	132,231	152,465	168,554
San Martin	73,000	78,761	103,952	129,365
Apopa	163,974	171,833	205,488	235,614
Nejapa	15,000	15,492	17,466	18,350
Tonacatepeque	29,000	30,265	35,503	39,509
Total	1,869,213	1,919,698	2,146,743	2,327,381

Source: arranged by the Study Team on the basis of information from the municipalities and Dirección General de Estadística y Censos, Ministerio de Economía, 1995, "Proyección de la Población de El Salvador," El Salvador

b. Economic Conditions

Table 1-2 and Table 1-3 show forecast GRDP growth rate and amount in AMSS.

Table 1-2: GDP Growing Ratio in AMSS

	Unit	1999	2000	2001 to 2005	2006 to 2010
GDP growth rate	%	2.1%	3.5%	5.0%	4.0%
GRDP growth rate	%	2.6%	4.0%	5.5%	4.5%

Table 1-3: Forecast of GRDP in AMSS

	Unit	1999	2000	2005	2010
GRDP	million colones in 1998 price	42,057	43,739	57,166	71,239
GRDP/capita *	US\$	2,466	2,500	2,927	3,369

Note: * divided by total population of 14 municipalities

1.6.2 Waste Amount and Composition

a. Waste Amount

Waste amount forecast is shown in Table 1-4 and Table 1-5.

Table 1-4: Waste Generation Amount in 2010

	Household	Restaurant	Other than restaurant	Institutional	Market	Road sweeping	Total
San Salvador	257.6	9.4	24.7	18.3	39.2	64.4	413.6
Mejicanos	101.0	4.8	10.9	8.5	2.8	5.8	133.8
Delgado	79.8	4.2	10.6	4.6	0.9	3.0	103.1
Cuscatancingo	54.6	4.1	6.0	3.0	0.0	1.8	69.5
Ayutuxtepeque	21.2	0.6	1.8	2.1	0.5	0.5	26.7
San Marcos	34.5	1.8	2.7	1.3	0.9	1.4	42.6
Nueva San Salvador	106.8	3.3	8.2	8.1	5.5	8.5	140.4
Antiguo Cuscatlan	41.2	1.1	3.6	4.6	1.2	10.2	61.9
Soyapango	136.4	11.2	13.4	8.9	6.2	2.5	178.6
Ilopango	75.4	3.9	5.9	3.4	0.9	0.3	89.8
San Martin	57.5	6.0	6.7	2.9	7.8	0.3	81.2
Apopa	100.4	9.3	8.9	3.2	11.3	1.1	134.2
Nejapa	8.9	0.7	1.3	0.4	0.2	0.1	11.6
Tonacatepeque	19.0	0.8	2.7	3.4	0.3	0.6	26.8
Total	1,094.3	61.2	107.4	72.7	77.7	100.5	1,513.8

unit : ton/day

Table 1-5: Forecast of Future Medical Waste Generation Amount

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Increase Rate	1.000	1.027	1.053	1.078	1.103	1.126	1.148	1.170	1.189	1.208	1.227	1.245
Amount (ton/day)	3.20	3.29	3.37	3.45	3.53	3.60	3.67	3.74	3.80	3.87	3.93	3.98

b. Waste Composition

Waste composition in the future is shown in Table 1-6 and Table 1-7.

Table 1-6: Physical Composition of Household Waste

Composition	Unit: %		
	High income	Middle income	Low income
Combustible	95.5	94.4	93.4
Food waste	59.5	57.6	66.0
Papers	18.5	13.0	13.1
Textiles	1.2	1.1	2.5
Grass, wood, bamboo	2.7	16.8	4.0
Plastics	12.1	5.8	7.8
Rubber, leather	1.5	0.1	0.0
Incombustible	4.5	5.6	6.6
Metals	1.3	1.1	1.2
Bottles, glass	1.3	2.6	3.7
Ceramics and soil	0.2	0.7	0.6
Others	1.7	1.2	1.1
Total	100.0	100.0	100.0

Table 1-7: Physical Composition of Commercial, Institutional, Market and Road Sweeping Waste

Composition	Commercial		Institutional	Market	Road sweeping
	restaurant	Other			
Combustible	95.1	97.5	89.3	96.8	88.3
Food waste	62.2	6.4	19.0	78.1	2.6
Papers	22.1	63.1	35.0	9.5	6.4
Textiles	0.0	5.2	1.1	0.3	0.4
Grass, wood, bamboo	0.3	11.8	12.3	1.4	75.3
Plastics	10.2	10.6	20.5	7.2	3.6
Rubber, leather	0.3	0.4	1.4	0.3	0.0
Incombustible	4.9	2.5	10.7	3.2	11.7
Metals	0.7	1.3	0.5	0.4	0.1
Bottles, glass	2.4	0.3	4.6	0.8	0.3
Ceramics and soil	0.0	0.0	1.6	0.7	9.8
Others	1.8	0.9	4.0	1.3	1.5
Total	100.0	100.0	100.0	100.0	100.0

1.6.3 Life Span of Equipment and Facilities

Service lives of facilities were set as shown in Table 1-8. On the other hand, landfills' service lives were set according to their capacities.

Table 1-8: Life Span and Salvage Value

	Service life (year)	Salvage value (%)
Truck & heavy equipment	7	0
Transfer station	20	0
MRF	15	0
Medical waste incinerator	15	10

1.7 Work Schedule of the Study

The schedule of the study work is shown in Figure 1-1.

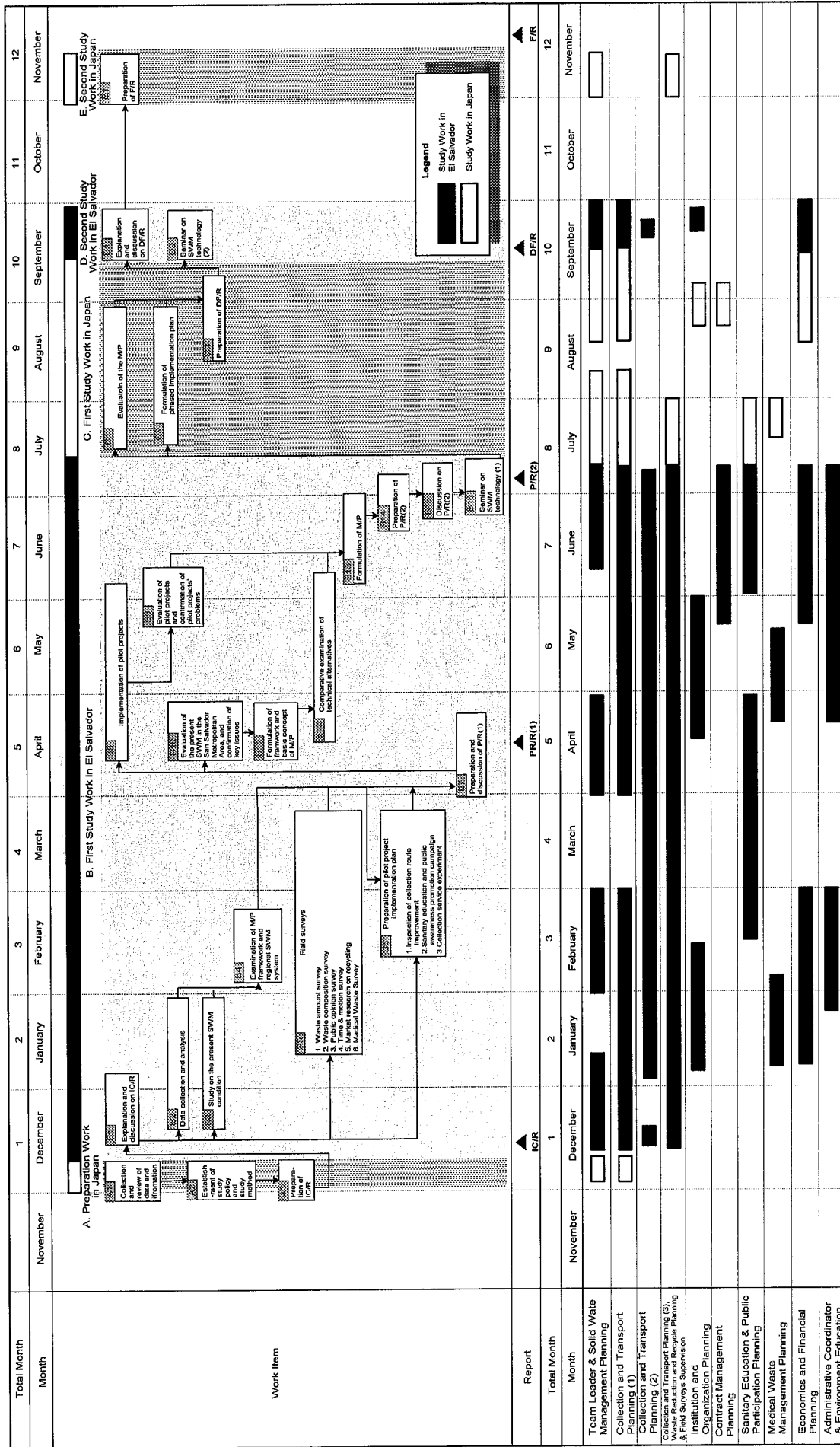


Figure 1-1: Study Schedule

1.8 Organization of the Study and the Assignment of the Study Team

Organizational structure, members and advisory committee for the Study are as follows:

a. Organizational Structure of the Study

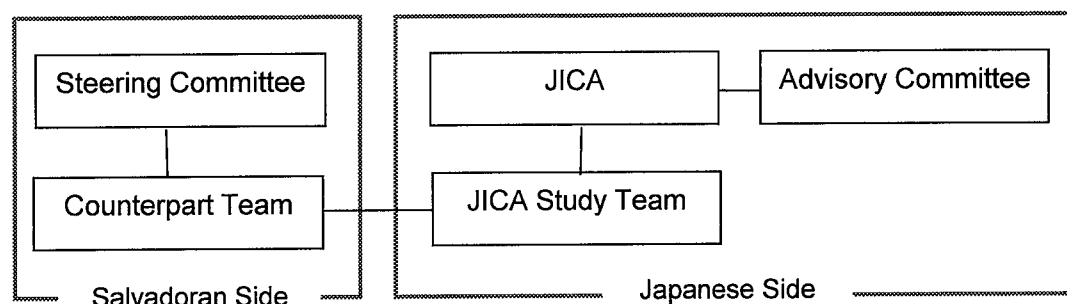


Figure 1-2: Study Organizational Structure

b. Members of the Study Team

Assignment	Expert	Nationality
Team Leader & Solid Waste Management Planning	Hiroshi KATO	Japanese
Collection and Transport Planning (1)	Tadaya YAMAMOTO	Japanese
Collection and Transport Planning (2)	Carlos Melendez	Salvadoran
Collection and Transport Planning (3), Waste Reduction and Recycle Planning & Field Surveys Supervision	Ikuo MORI	Japanese
Institution and Organization Planning	Guido ACURIO	Peruvian
Contract Management Planning	Victor OJEDA	Costa Rican
Sanitary Education & Public Participation Planning	Masaharu KINA	Japanese
Medical Waste Management Planning	Tamotsu SUZUKI	Japanese
Economics and Financial Planning	Kozo BABA	Japanese
Administrative Coordinator & Environment Education	Ayako IDO	Japanese

c. Members of the JICA Advisory Committee

Assignment	Expert
Chairman & Solid Waste Management Planning	Hidetoshi KITAWAKI Professor, Faculty of Regional Development Studies, Toyo University

1.9 Technology Transfer

During the study, the study team endeavored to transfer technology to the Salvadoran counterpart through the following:

- On the job training (through the whole period of the study)
- Meetings on technology (about every two weeks)
- Explanation of reports (IC/R, P/R(1), P/R(2) and DF/R)
- Seminars on SWM technology (P/R(2) and DF/R)

2 Profile of the Study Area

2.1 Natural Condition

The Republic of El Salvador is located at the Central American Isthmus in the American continent; in the Western Hemisphere and at northern latitude. Its geographical coordinates are the following: 13° 09' and 14° 27' northern latitude and 87° 41' and 90° 07' western longitude. Altitudes of the Study Area varies from 434m of Apopa to 950 m Nueva San Salvador.

There exist two seasons and two transition periods in a year in El Salvador. According to records in San Salvador¹ from 1918 to 1967, the following average dates for the beginning and end of seasons were calculated, which are shown in Table 2-1.

Table 2-1: Season of Year

Seasons of Year	Beginning	End	Days	Weeks
Dry season	November 14 th	April 19 th	157	22.5
Transition from dry to rainy season	April 20 th	May 20 th	31	4.5
Rainy season	May 21 st	October 16 th	149	21
Transition from rainy to dry season	October 17 th	November 13 th	28	4

Source: Dirección General de Recursos Naturales Renovables División de Meteorología e Hidrología, Almanaque Salvadoreño, Ministerio de Agricultura y Ganadería.

Table 2-2: Climate Parameters registered in Ilopango Meteorological Station

Item/Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total (Mean)
Mean monthly precipitation (mm)	5.9	4.0	9.7	39.8	153.1	285.7	321.4	316.8	346.8	229.0	38.0	11.0	1761.2 (146.77)
Mean monthly temperature (°C)	22.3	22.9	23.9	24.6	24.3	23.5	23.5	23.3	22.9	22.9	22.5	22.2	23.23
Predominant wind direction	N	N	N	N	N	N	N	N	N	N	N	N	N
Mean wind velocity (km/Hr)	10.2	12.6	11.9	11.1	9.7	8.3	9.3	8.6	7.9	10.1	12.2	14.0	10.5
Mean monthly relative humidity (%)	66	66	67	70	77	84	82	82	86	82	77	68	76

Source: Dirección General de Recursos Naturales Renovables División de Meteorología e Hidrología, Almanaque Salvadoreño, Ministerio de Agricultura y Ganadería

The area has undergone around 50 destructive earthquakes since year 1500. The last earthquake registered was on October 10th, 1986 with a magnitude of 7.5 degrees in Richter scale.

¹ Almanaque Salvadoreño, Ministerio de Agricultura y Ganadería, Servicio de Metereología e Hidrología.1999.

2.2 Socioeconomic Conditions

2.2.1 Macro Economy of the Country

The national economy represented by gross domestic product (GDP) between 1965 and 1980 showed about 4.4% annual growth on average in El Salvador. However, in 1980s its annual growth dropped to about 0.9% due to the civil war and the monetary crisis.²

Since the peace pact between the then government and FMLN was concluded in 1992, a constant economical growth has been recorded so that the annual GDP growth between 1992 and 1995 ranged around 6.5% on average. The growth rate recorded the largest among the Central American countries during this time.

However, its annual growth dropped to 3.2% in 1998 due to damages caused by the Hurricane Mitch, and in 1999 a cloud seems to be still hanging over the national economy even more dropping to 2.1%. However, it is expected that it will go up to 3 to 4% in the year 2000.

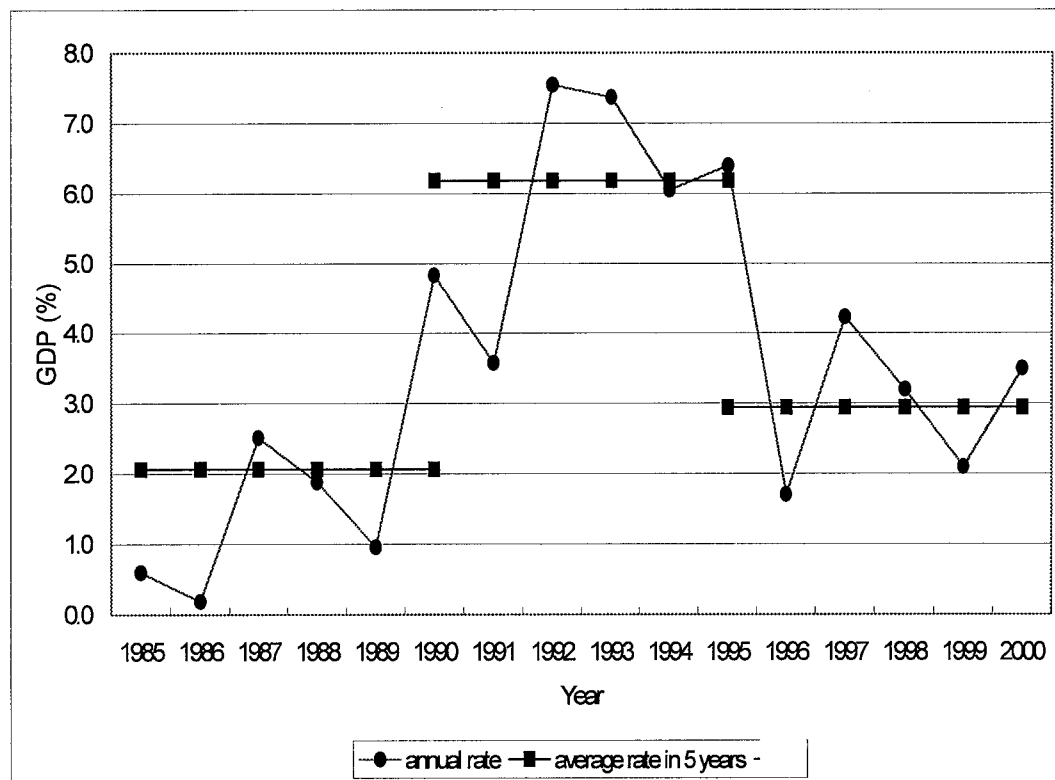


Figure 2-1: Economic Growth Rate (GDP)

Table 2-3 shows the national industrial structure in terms of sectors' GDP in 1994 and 1998. It illustrates that agricultural and house renting sectors made little growth and sectors such as 'financing & insurance' and 'electricity, gas, and water supply' made considerable growth during this time.

² FUSADES, Crecimiento con participación: una estrategia de desarrollo para el siglo XXI, 1999.

Manufacturing industries made constant development with about 6.1% annual growth in GDP. The growth in domestic demands as well as the production increase by exporting industries in free zones supports industrial development of the country.

Table 2-3: Trend of Industrial Structure

Sector	year	1994		1998		1998/1994 growth rate
		Amount* (million colones)	Ratio (%)	Amount* (million colones)	Ratio (%)	
Agriculture		6,394	14.7	6,669	13.2	1.043
Mining		195	0.5	236	0.5	1.211
Manufacturing		9,749	22.5	12,359	24.4	1.268
Electricity, Gas, Water supply		253	0.6	343	0.7	1.355
Construction		1,719	4.0	2,055	4.1	1.196
Commerce, Restaurant & Hotel		9,129	21.1	10,385	20.5	1.138
Transport, Warehousing, Communication		3,467	8.0	4,290	8.5	1.237
Financing & Insurance		1,240	2.9	1,777	3.5	1.433
Real Estate & Business service		1,532	3.5	1,785	3.5	1.165
House renting		4,369	10.1	4,696	9.3	1.075
Community & Personal service		2,562	5.9	2,918	5.8	1.139
Government service		2,693	6.2	3,034	6.0	1.127
Total		43,302	100.0	50,547	100.0	1.167

Note: * 1990 constant price

2.2.2 Administration

El Salvador is a sovereign nation with a republican, democratic and representative government. The state commands the country through the Executive, Legislative and Judicial branches.

The legislative function is exercised by the Legislative Assembly, which is constituted by 84 members through elections every three years and can be reelected.

The executive function is exercised by the President of the Republic, who is also voted by the population every five years and assisted by the Vice-President, Ministers, State Vice-ministers and related officials. The Ministry of Health and Social Assistance and the Ministry of Environment and Natural Resources are the closest bodies related to the management of urban solid wastes.

The territory of El Salvador is formed by 14 departments with 262 municipalities, 2074 cantons and *caseríos* (group of houses). Mayors' governing term is three years.

The Municipal Code that was issued by means of legislative decree No. 274 in February 1986, in Title III, "Municipal Jurisdiction", states the following: "municipalities will be in charge of rendering the cleansing service, street sweeping, collection and final disposal of garbage".

On July 14th 1987, Official Gazette No. 129 issued the resolution for the creation of a decentralized and autonomous body called "Mayors Council for San Salvador Metropolitan Area (COAMSS)", whose functions are the following, among others:

- Planning and control of AMSS in order to utilize resources efficiently.
- Coordination of public investments and services rendered in AMSS.

- Coordination of activities among municipal governments that belong to such entity in order to achieve a harmonic and sustainable development of their municipalities.
- Facilitate the reconstruction of AMSS, which suffered damages by the earthquake on October 10th, 1986.

Legislative decree No. 732, issued in December 1993 sets forth the development and territorial arrangement of AMSS, whose institutional framework is as follows:

- COAMSS: Administrative body that executes urban-planning functions,
- OPAMSS: Planning Office for AMSS, a technical entity which acts as COAMSS' Executive Secretary,
- CODEMET: Metropolitan Development Council, a body with evident political purposes, and
- COPLAMSS: Planning Committee for AMSS, a technical-advising body for CODEMET.

CODEMET and COPLAMSS have not operated since they were created.

2.2.3 Public Health

The provision of healthcare in El Salvador can be divided into three main blocks: public services, social welfare, and private services. In the public sector, the Ministry of Public Health and Social Welfare (MSPAS) provides services, covering 80% of the population.

Social insurance is provided to employees of private companies, and industries, and state employees, covering 17% of the population.

The infant mortality rate decreased from 137 per thousand live births in 1960 to 41 per thousand live births in 1993. The estimated rate for 1998 was 32 per thousand live births.

In 1994, the main causes of infant death between the age of one and four, was the contagious diseases with 47%, of which 28.4% was related to intestinal infections.

The top ten causes of death registered in the external consultation of the MSPAS in 1997 were: 1) respiratory infections; 2) intestinal parasitism; 3) gastrointestinal disease.

2.3 Urban Structure

2.3.1 Origin and Evolution of the Study Area

In 1954, Spanish architect Gabriel Riesco Fernández designed the "First Planning of San Salvador" by request from the Department of Urbanism and Architecture of the Ministry of Public Works. His target year was 1994.

This plan concentrated on infrastructure to outline the road and street system, controlling of urban development to preserve the right of way.

On October 10 1986, a strong earthquake shook San Salvador; as a consequence, the Council of Mayors for San Salvador metropolitan area (COAMSS) and the Planning

Office for San Salvador metropolitan area (OPAMSS) were established. Their purpose is to plan the development of the metropolitan area.

Table 2-4: Municipalities forming San Salvador Metropolitan Area

No	Municipality	1968	1987	1988	1994	1996	1999
1	San Salvador	X	X	X	X	X	X
2	Mejicanos	X	X	X	X	X	X
3	Ciudad Delgado	X	X	X	X	X	X
4	Cuscatancingo	X	X	X	X	X	X
5	Ayutuxtepeque	X	X	X	X	X	X
6	San Marcos	X	X	X	X	X	X
7	Nueva San Salvador	X		X	X	X	X
8	Antiguo Cuscatlán	X	X	X	X	X	X
9	Soyapango	X	X	X	X	X	X
10	Ilopango	X	X	X	X	X	X
11	San Martín			X	X	X	X
12	Apopa		X	X	X	X	X
13	Nejapa		X	X	X	X	X
14	Tonacatepeque					X	X
Total		10	11	13	13	14	14

2.3.2 Population Density

Population density in 1999 in AMSS is 105 persons/ha as shown in Table 2-5.

Table 2-5: Population Density in AMSS in 1999

Municipality	Population	AU	Density
	person	ha	pers./ha
San Salvador	473,374	4,630	102
Mejicanos	185,204	1,050	176
Ciudad Delgado	149,394	1,410	106
Cuscatancingo	90,079	470	192
Ayutuxtepeque	38,158	170	224
San Marcos	69,660	440	158
Nueva San Salvador	152,723	1,280	119
Antiguo Cuscatlán	42,773	890	48
Soyapango	283,598	1,920	148
Ilopango	127,434	1,100	116
San Martín	101,086	1,520	67
Apopa	163,974	1,610	102
Nejapa	31,466	630	50
Tonacatepeque	39,871	1,450	27
Total	1,948,794	18,570	105

2.3.3 Transportation

Major means of transportation in AMSS are buses, trucks and cars. Although railroad lines cross through AMSS, those do not currently provide service for passengers for internal trip within AMSS.

2.4 Financial Condition

2.4.1 Public Finance of the Central Government

The current expenditure (real) in 1999 turned out to be 13,031 million colones which is 2.7% more than the figure (12,678 million colones) projected at the beginning of the year. On the other hand, the current revenue (real) of 13,417 million colones in the same year turned out to be 4.5% more than the projected figure (12,834 million colones). Consequently, the real current balance in 1999 was 386 million colones in black.

However, since the real capital expenditure was 2,558 million colones and the real capital revenue was 191 million colones, the real balance was 1,981 million colones in red in that year.

2.4.2 Annual Budget of Related Ministries and Institution

Trends in annual budget for MSPAS, MARN and ISDEM from 1995 to 1999 are summarized in the table below.

Table 2-6: Annual Budget of Related Ministries

Unit: million colones

		1995	1996	1997	1998	1999
MSPAS	Budget	1,205	1,318	1,318	1,326	1,589
	Execution	1,117	1,272	1,263	1,506	1,629
MARN	Budget	0	0	0	25	24
	Execution	0	0	1	18	24
ISDEM	Budget	25	125	125	?	?
	Execution	92	143	125	?	?

Source: MOH

2.4.3 Taxation System

As the revenues of the central government shows, the national tax mainly comprises of income tax, import tax, and value added tax (VAT). Income tax consists of tax imposed on personal income and corporate bodies' income. Personal income tax rates are shown in the table below. The corporate tax is 25% of the annual corporate income if it exceeds 75,000 colones. The VAT is 13% on the sale value.

Table 2-7: Personal Income Tax Rates

Annual income (colones)	Tax rates
0-22,000	tax exempt
22,001-80,000	colones are taxed at 10% + 500 colones
80,001-200,000	colones are taxed at 20% + 6,300 colones
200,000<	colones are taxed at 30% + 30,000 colones

2.5 Environmental Policy

The basic environmental policy expressed in the “1994-1999 Government Plan for the Republic of El Salvador” outlines its objectives such as natural resource protection, search of population and territorial equilibrium. The “National Environmental Strategy (Estrategia Nacional de Medio Ambiente)” issued in 1994 also proposes solutions for the major environmental problems caused by development. However, efforts for practical execution of environmental policies have just recently started in El Salvador.

MARN was created on May 16th, 1997 (Executive Decree No. 27), in place of the former governing institution: the Executive Secretariat for the Environment (Secretaría Ejecutiva del Medio Ambiente: SEMA), in order to expand environmental management at national governmental level.

MSPAS reserves competency regarding public health issues of national policy.

With regard to an environmental policy on SWM, MARN issued the “Transitory Decree of Solid Waste” on October 6th, 1999 and was turned into the “Special Regulation on Integral Solid Waste management” on June 1st, 2000.

2.6 Other Infrastructure

2.6.1 Water Supply and Sewage

The body in charge of supplying drinkable water is the *Administración Nacional de Acueductos y Alcantarillados* (National Aqueduct and Sewerage Administration “ANDA”). It was created by decree N° 341 from the Civil and Military Directory on October 17th, 1961, and is defined as an autonomous public service institution whose objective is providing and helping the inhabitants of the Republic with aqueducts and sewerage systems.

The 1992 Housing Census conducted by DIGESTYC shows that 79.7 % of the houses in AMSS were supplied with water mains.

In general terms, AMSS’ drainage system has six main sewage channels oriented from west to east, and discharges waters to Las Cañas and Acelhuate rivers with no previous treatment. The 1992 Housing census shows that 72.8% of houses discharge in the sewerage system, 3.2% use septic tanks and the remaining percentage discharges in the ground, in ravines, and any places.

2.6.2 Roads

According to the Law on Territory Arrangement of AMSS, chapter III article 36 defines the hierarchy and functioning of the road system, which is divided into two main groups; major traffic and minor traffic roads.

Major traffic roads: Freeways, primary trunk and secondary trunk roads. These roads should be planned and coordinated by the Transport Department of Ministry of Public Works and construction works are carried out by the Central Government.

Minor traffic roads: These roads are defined and controlled by the regulation in the Law on Territory Arrangement and they are divided into distribution roads, repartition roads and driveways.

2.6.3 Priority Ranking of Infrastructure Investment

PLAMADUR's (Master Plan for Urban Development in AMSS) Diagnosis and Proposal document shows eight strategic investment areas and their respective projects that should go along with the Integral Development Plan of AMSS (Table 2-8):

Table 2-8: Programs Developed by PLAMADUR

Investment Program	Projects	US\$
1 Environmental investment program	20	35,422,000
2 Territory arrangement investment program	47	1,040,688,500
3 Downtown rescue investment program	9	63,698,200
4 Neighborhood improvement investment program	4	13,544,000
5 Open spaces investment program	13	7,916,000
6. Solid waste management investment program	15	34,610,500
7 Water safeguard investment program	6	49,640,000
8 Institutional strengthening investment program	6	2,344,500
Total	120	1,247,863,700

Source: PLAMADUR-AMSSA