

Chapter 1

Current State of the Venezuelan Economy and Society and Major Issues Relevant to Small- and Medium-sized Manufacturing Enterprises

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1.1 Macroeconomic Overview

1.1.1 GDP

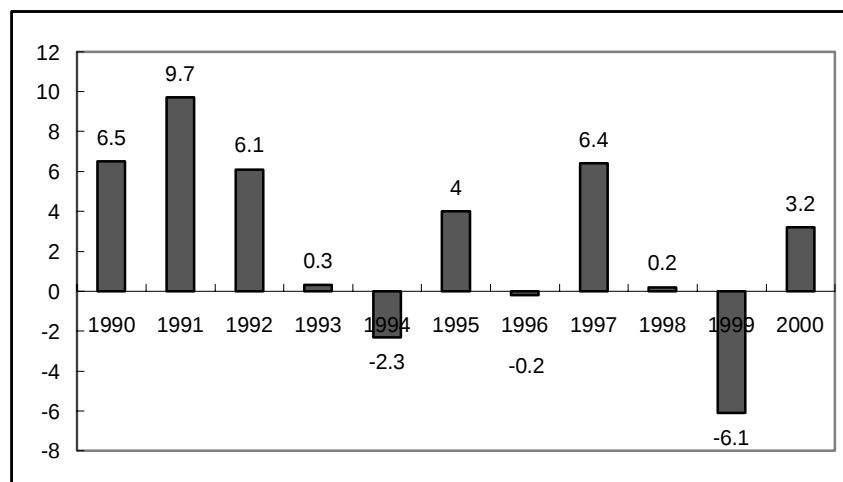
The Venezuelan government has been striving to establish a stable economic base by using economic resources amassed from oil revenues in the 1970s and 1980s, which were realized through the OPEC-led price hikes, and by developing non-oil industries such as aluminum and iron and steel. However, the economy still depends heavily on oil revenues and is vulnerable to price fluctuation, as continued in the 1990s and to this date.

Historical trends in the country's GDP growth rates are summarized as follows (Figure 1.1.1).

- The average growth rate of real GDP in the 1960s and 1970s: +3.7% (Rapid increase in oil revenues in 1973, 1974 and 1979)
- 1980 – 1993: +2.1%
- 1989: -7.8% (August 1990, oil prices jumped due to Iraq's invasion of Kuwait)

Then, GDP trends between 1990 and 2000, based on data published by MPD (Ministry of Planning and Development, May 2001) are shown in the following graph.

FIGURE 1.1.1 GDP GROWTH TRENDS (%)



Source: Central Bank of Venezuela (BCV)

Then, the GPD trends are divided into the oil and non-oil sectors as shown in Figure 1.1.2. The non-oil sector recorded negative growth of 1.3% in 1993, and after growth in 1995 to reflect economic reforms, it declined again in 1998 due to the sluggish market and the decline in oil price, followed by a further decline in 1999.

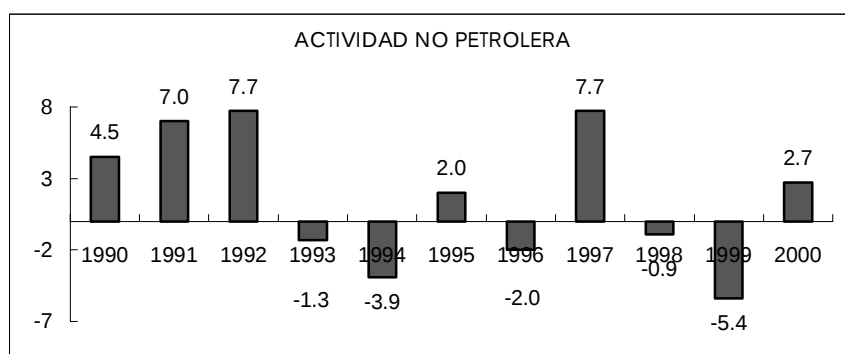
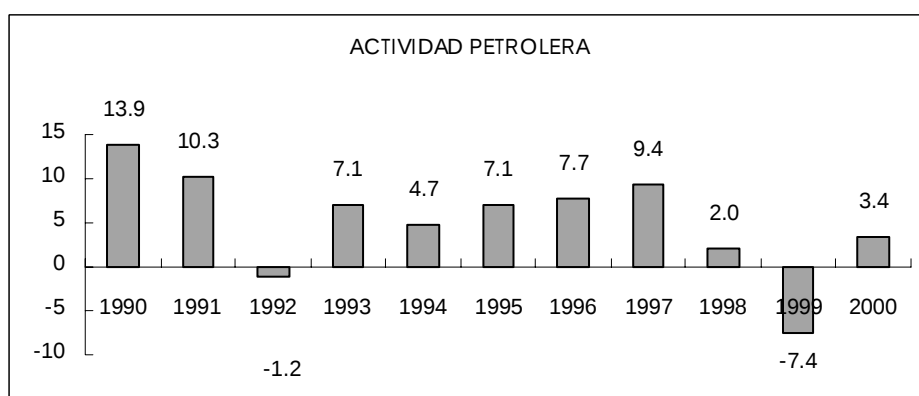


FIGURE 1.1.2 NON-OIL SECTOR'S GROWTH RATES(%)

Source: BCV

FIGURE 1.1.3 OIL SECTOR'S GROWTH RATES(%)

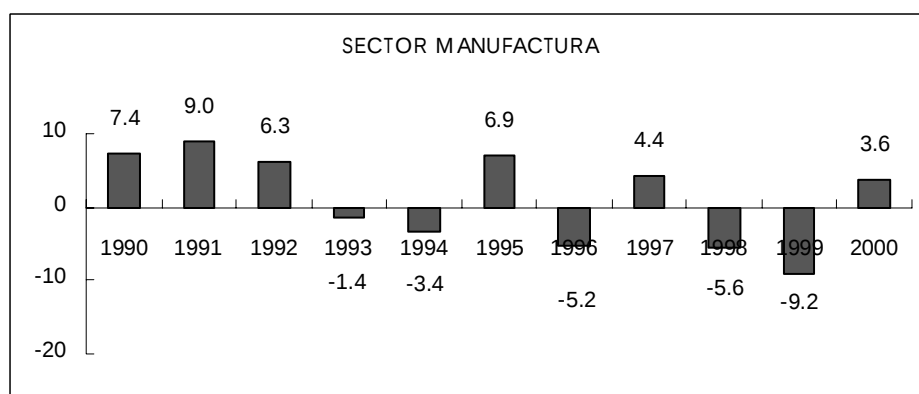


Nota: La tasas de variación del año 1998 y 1999 son de carácter preliminar

Source: BCV

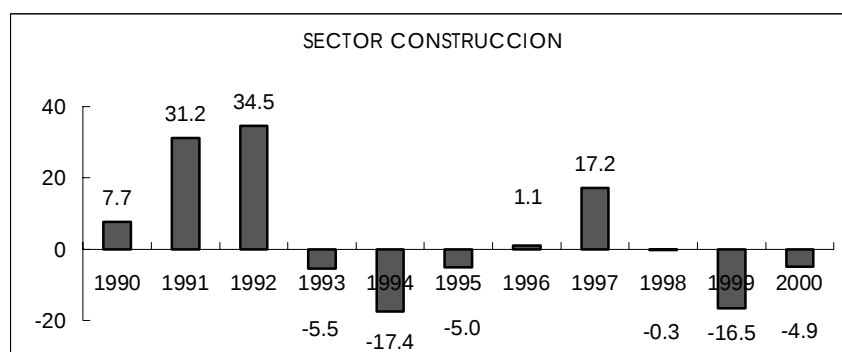
Then, growth trends of the manufacturing, construction, electricity and water, and other sectors are shown in Figures 1.1.4 – 1.1.7.

FIGURE 1.1.4 MANUFACTURING SECTOR'S GROWTH RATES (%)



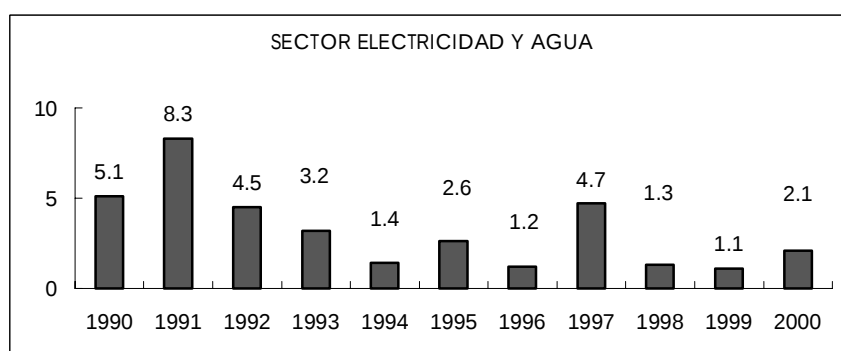
Source: BCV

FIGURE 1.1.5 CONSTRUCTION SECTOR'S GROWTH RATES (%)



Source: BCV

FIGURE 1.1.6 ELECTRICITY AND WATER SECTOR'S GROWTH RATES (%)



Source: BCV

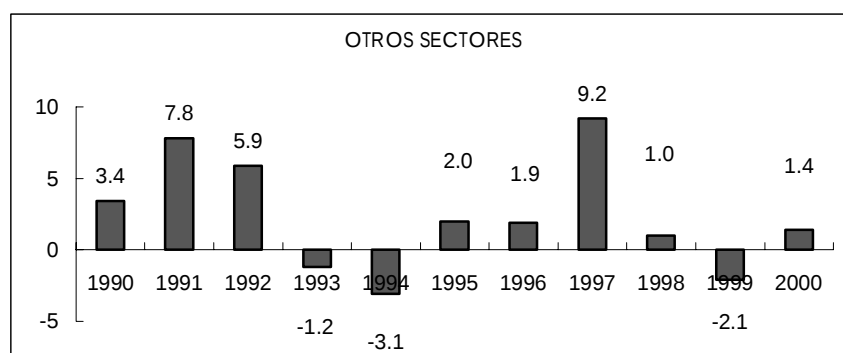


FIGURE 1.1.7 OTHER SECTORS' GROWTH RATES (%)

Source: BCV

During the past decade (1991 – 2000), the average growth rate is 2.03%, with annual fluctuations that were primarily caused by oil prices. As the country's population growth rate is still high (2.7% between 1990 and 1997, according to U.N. statistics), GDP per capita remained flat during the period and standards of living did not improve for most people in the country.

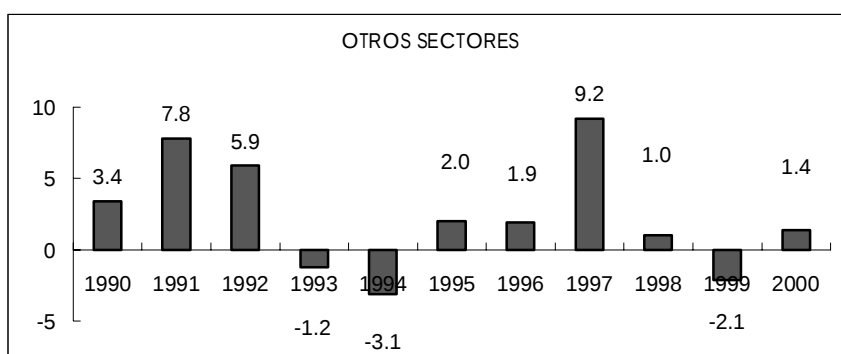
In 2000, GDP grew 3.2% due to growth of both the oil and non-oil sectors, making a sharp upturn from negative growth of 6.1% in 1999. Accordingly, domestic consumption expanded in the public and private sectors, up 4.8% from a year earlier. Investment also increased 2%. The economic growth is primarily supported by high oil prices in the international market.

Thus, while macroeconomic indicators suggest the healthy economic conditions, the country still relies much on the oil and related sectors. To ensure sustainable economic growth in the long run, therefore, the non-oil sector must be revitalized to achieve a balanced industrial structure and promote broad-based production activities, including SMEs. To achieve these goals, promotion of investment in the non-oil sector is essential and economic stability (improvement of the investment climate) must be maintained to attract a stable flow of investment.

1.1.2 Price trend

As shown below, inflation has gradually been subsided and prices appear to be in the course of stabilization. It should be noted that price stability is a direct consequence of government policy to keep the Bolivar and interest rates at high levels. Together with low tariff rates, these policies encourage imports and therefore bring domestic prices down to international price levels. Increased imports, however, have an adverse effect on local manufacturers which cannot compete with imported products. In fact, bankruptcy of small manufacturers has increased rapidly since 1995 when the government started the policy to support the strong Bolivar. Industries are criticizing the policy, but it is an inevitable solution for the government that attempts to achieve economic stability by keeping inflation in check.

FIGURE 1.1.8 INFLATION TRENDS (1987 ~ 2001 FORECAST)

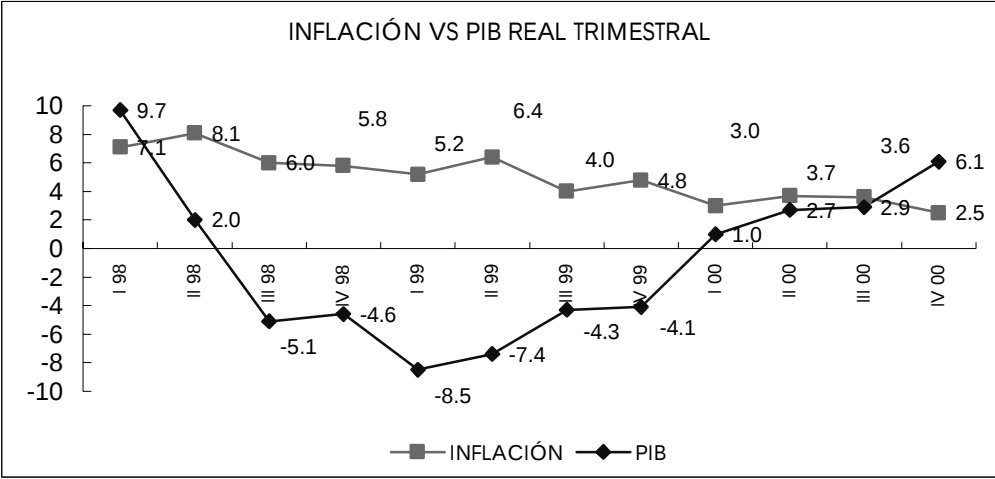


Nota: El dato de 2001 corresponde a la inflación acumulada durante el período Dicl.'00-May'01
Source: BCV

Now that inflation is in control, the government is expected to appreciate vitality of industries and companies that have survived through the five-year period of the high Bolivar by providing necessary support to help them strengthen their competitiveness. As the inflation rate has settled down to a 10% level, the continued exchange policy (i.e., to keep the local currency at a high level, with the devaluation up to 50% of the inflation rate) will not likely handicap local industries as before. In other words, it is the time to strengthen and modernize industries, which have failed to do so because they underwent the wave of currency devaluation in the early 1980s and hyperinflation in the early 1980s. It should therefore be avoided to ask for an easy solution such as the induced devaluation for export competitiveness, which would run a risk of putting a brake on industrial development in the country as a whole.

Furthermore, quarterly changes in GDP growth rates and inflation rates in the recent three years (1998 – 2000) are shown in Figure1.1.9.

FIGURE1.1.9 QUARTERLY CHANGES IN GDP GROWTH RATES AND INFLATION RATES



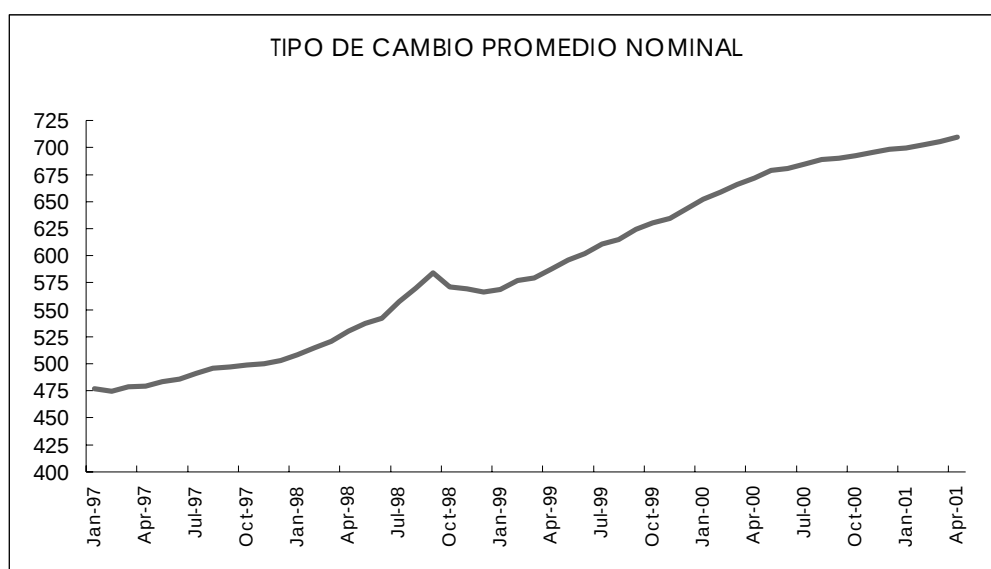
Source: BCV

1.1.3 Exchange policy and control

The country devaluated the Bolivar by 7.98% in 2000. The devaluation rate was still deviated from the inflation rate (see Table 1.1.1), but the difference seems to be narrowing as inflation subsides. In the meantime, the central bank is taking the steps to stabilize the currency by establishing a new fluctuation band and developing a plan to adjust a margin of deviation.

Thus, as discussed in the previous section, the present exchange policy should be accepted as effective measures for inflation control. As the policy is maintained, price stability will be followed by currency stabilization that will take effect in due course.

FIGURE 1.1.10 FOREIGN EXCHANGE RATES (BS./USD, MONTHLY AVERAGE)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997	476.8	474.4	478.4	479.3	483.3	485.6	491.3	495.9	496.8	498.6	499.9	502.8
1998	508	514.6	520.9	530.1	537.1	542.3	557.4	570.2	584.4	571.3	569.3	566.2
1999	568.8	577.1	579.4	587.4	595.8	602.1	610.6	615.2	624.5	630.2	634.2	643.4
2000	652.2	658.5	666.1	672	678.7	680.6	685	688.9	690	692.5	695.3	698.3
2001	699.7	702.6	705.5	709.6								

Source: BCV

TABLE 1.1.1 FOREIGN EXCHANGE RATES AND DEVALUATION TRENDS

Item	Unit	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Exchange Rate	Bs/US\$	61.554	79.450	105.640	170.000	290.000	476.500	504.250	564.500	648.250	700.000
Devaluation Rate	%	22.18%	29.07%	32.96%	60.92%	70.59%	64.31%	5.82%	11.95%	14.84%	7.98%
CPI	%	34.00%	31.30%	38.60%	60.70%	60.00%	99.90%	50.00%	35.80%	23.60%	17.10%
B/C	%	65%	93%	85%	100%	118%	64%	12%	33%	63%	47%

Source: UN Statistics

1.1.4 Balance of payments

The country's trade balance in 2000 turned to a \$6.6 billion deficit due to the increase in exports, mainly oil, and a considerable decline in imports. On the capital account, there was a deficit of \$1.81 billion, compared with \$1.65 billion in 1999. The overall balance of payments recorded a surplus of \$2.35 billion.

The capital account deficit suggests repatriation of foreign capital in response to contraction of the domestic capital market caused by the unfavorable economic policy (particularly the foreign exchange policy), and its adverse effects in economic and technological aspects. It is important to realize that direct investment by foreign firms plays a critical role in industrial development of LDCs, especially the manufacturing sector, in terms of technology transfer, development of competitiveness, export promotion, and modernization of corporate management according to global standards.

To attract foreign direct investment to the country again, economic stability must first be achieved by controlling inflation, followed by revitalization of the domestic economy. Then efforts should be made to improve the investment climate, with public support and programs to encourage direct investment.

TABLE 1.1.2 BALANCE OF PAYMENTS

	UNIT	1996	1997	1998	1999	2000
Current Account	MM\$	8,824	3,467	-2,562	3,689	6,647
Exports	MM\$	23,400	23,703	17,564	20,819	15,817
Oil	MM\$	18,385	18,291	12,124	16,697	13,254
Non Oil	MM\$	5,015	5,402	5,440	4,122	2,563
Imports	MM\$	-9,810	-13,678	-14,816	-13,213	-7,379
Financial Account	MM\$	-1,495	1,523	1,780	-1,650	-1,810
Balance of Payments	MM\$	6,533	3,530	-2,932	1,049	2,348
International Reserves	MM\$	15,229	17,818	14,849	15,164	15,094
Exchange Rate						
Nominal Average	Bs/US\$	419.5	488.8	548.1	60.4	668.7
Real (Index: Jun'96=100)		79.1	56.5	47.6	43.1	41.1

Source: BCV

1.1.5 Government finance

Traditionally, oil revenues account for 50-60% of government revenues, compared to revenues of state enterprises 4-5% and tax revenues 30-35%. Again, a very high degree of dependency on oil revenues is noteworthy. The government budget in FY2000 turned into a deficit equivalent to 1.8% of GDP because public investment increased 46% from the previous year and far exceeded oil revenues that also grew significantly.

Clearly, major issues facing government finance are the low level of tax revenues and the excess dependency on oil revenues, which makes it vulnerable to external economic conditions. It is desirable to increase tax revenues by invigorating economic activities of the non-oil sector and by strengthening the taxation system, including effective enforcement and collection. On the other hand, the budget deficit and the issuance of treasury bonds to finance increased public investment are basically justified to cope with the ongoing recession and the rise in unemployment rate, which create signs of social unrest.

TABLE 1.1.3 GOVERNMENT FINANCE (1999 ~ 2000)

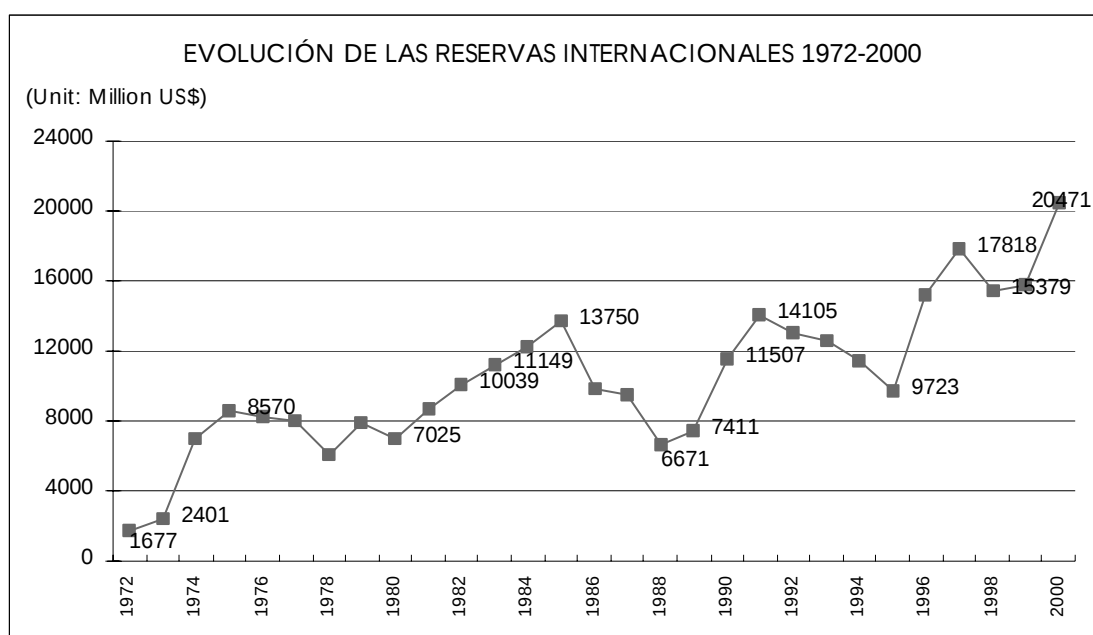
	MM Bs.		Increase/decrease over previous year (%)	Percentage share of GDP(%)		Composition (%)	
	1999	2000		1999	2000	1999	2000
Revenues	10,213	15,522	52.0	16.3	18.9	100.00	100.00
Oil	3,947	7,989	102.4	6.3	9.8	38.65	51.47
Non-oil	6,266	7,533	20.2	10.0	9.2	61.35	48.53
Expenditures	11,488	17,710	54.2	18.4	21.6	100.00	100.00
Ordinary	9,691	15,152	56.3	15.5	18.5	84.36	85.56
(Interest)	(1,933)	(1,832)	(-5.2)	(3.1)	(2.2)	(19.95)	(12.09)
Capital	1,797	2,558	42.4	2.9	3.1	15.64	14.44
Balance	-1,275	-2,188	71.6	-2.0	-1.8		

Source: OCEPRE

1.1.6 Foreign currency reserves

As of January 2001, the central bank and FIEM held \$20,780 million of foreign currency reserves, an increase of \$340 million from the end of 2000. Compared to the end of 1999, \$5.1 billion were added.

FIGURE 1.1.11 FOREIGN CURRENCY RESERVES



Source: BCV

1.2 Socioeconomic Conditions

1.2.1 Population

Between 1990 and 1996, population in Venezuela increased at an annual 2.7%, the highest growth rate in Latin America to rank with Paraguay. According to the central bank's official data in 1999, the country's population totaled 23,710,809, a 4.1% increase over 19997. Growth factors are relatively high birth rates, low mortality rates, and migration from neighboring countries (a total of 1.8 million migrated from Colombia).

The high population growth rate sets off the effect of economic growth as evidenced by GDP per capita that remains unchanged in recent years. Also, the dominant position of the oil and related industries in the economy suggests presence of uneven income distribution and related problems. Core problems are therefore found in uneven distribution of income and increased unemployment, which are aggravated by high population growth. They can only be overcome by revitalization of non-oil industries, particularly reconstruction of the farm sector (including forestry and livestock) and promotion of small- and medium-sized enterprises, especially light industries. Growth of rural areas and local industries will help absorb population that is excessively concentrated in urban areas by creating employment opportunities. Public support should be directed to infrastructure development for the farm sector (e.g., development of farm land, irrigation, transportation system), technical assistance (seed and soil improvement, fertilization, post-harvest handling and storage), promotion of agro-industry, and development of forestry and related industries as well as fishery and related industries.

1.2.2 Labor force

In 1999, population over 15 years of age amounted to 15,562,861, representing 65.6% of the total and up 5.5% from 1997. Recent trends in working population and employment are shown in Table 1.2.1.

TABLE 1.2.1 WORKING POPULATION AND EMPLOYMENT

Category	1997	1998	1999
Working population (1,000 persons)	9,507	9,907	10,225
Employed	8,495	8,816	8,742
Unemployed	1,012	1,091	1,340
Unemployment rate (%)	10.6	11.0	14.5

Source :BCV

Detailed breakdown of population according to employment status is summarized in Table 1.2.2.

TABLE 1.2.2 LABOR POPULATION IN ECONOMIC ACTIVITIES

Category	1997	1998	1999	98 / 97	99 / 98
Total population (persons)	22,784,025	23,246,657	23,710,809	2.0	2.0
Population over 15 years old	14,750,887	15,152,846	15,562,861	2.7	2.7
Non-working population	5,243,762	5,245,570	5,337,847	0.0	1.8
Working population	9,507,125	9,907,276	10,225,014	4.2	3.2
Employed	8,494,724	8,816,195	8,741,645	3.8	-0.8
Formal	4,418,223	4,409,017	4,160,647	-0.2	-5.6
Private sector	2,977,832	3,013,691	2,840,851	1.2	-5.7
Public sector	1,440,391	1,395,326	1,319,796	-3.1	-5.4
Informal	4,032,719	4,370,373	4,578,107	8.4	4.8
Household service	204,235	100,040	175,509	-51.0	75.4
Non-professional/self-employed	2,462,107	2,805,271	2,820,022	13.9	0.5
Employers	309,342	319,360	340,998	3.2	6.8
Employees/workers	993,158	1,035,940	1,077,248	4.3	4.0
Non-paid family work	63,877	109,762	164,330	71.8	49.7
Not classified	43,782	36,805	2,891	-15.9	-92.1
Unemployed	1,012,401	1,091,081	1,483,369	7.8	36.0
Suspended/discharged	787,300	911,080	1,340,182	15.7	47.1
New job seekers	225,101	180,001	143,187	-20.0	-20.5

Source : BCV

Recent changes in working population by industrial sector are summarized in Table 1.2.3.

**TABLE 1.2.3 RECENT TRENDS IN WORKING POPULATION
BY INDUSTRIAL SECTOR**

Industrial sector	1997	1998	1999	98 / 97	99 / 98
Agriculture	792,482	880,706	890,122	11.1	1.1
Mining/petroleum	93,846	83,466	57,061	-11.1	-31.6
Manufacturing	1,211,413	1,225,656	1,202,101	1.2	-1.9
Sub-total	2,097,741	2,189,828	2,149,284	4.4	-1.9
Electricity, gas, water	71,399	58,521	59,113	-18.0	1.0
Construction	745,094	771,696	665,227	3.6	-13.8
Commerce, restaurants, hotels	2,061,940	2,236,423	2,266,812	8.5	1.4
Transportation, warehousing, communication	551,947	574,554	604,483	4.1	5.2
Finance, banking, real estate	460,837	450,062	474,810	-2.3	5.5
Public, social and personal services	2,482,055	2,515,997	2,514,432	1.4	-0.1
Others	23,711	19,114	7,484	-19.4	-60.8
Total	8,494,724	8,816,195	8,741,645	3.8	-0.8

Source : BCV

According to the 1999 data, the service sector employed 54.7% of working population, and the production sector 24.6%. The manufacturing sector accounted for 13.8% of total, but the number of employees has been on the decline as shown in Table 1.2.3. Analysis of working population by sector between 1980 and 1994, on the basis of the WB-WDI data, indicates that the farm sector remained more or less unchanged at 19% and the service sector 48%. On the other hand, the manufacturing sector lost share from 32% to 25%. The long-term trend is the steady growth of employment in the service sector, which causes the agriculture and manufacturing sectors to decline. Also, as shown in classification of the central bank's data by sector, population in the "informal" sector exceeds 4.5 million and continued to grow between 1997 and 1999. Farm population dropped from 35% of total working population in the 1960s to 10% in 1998. On the other hand, employment in the oil sector – the most important industry in the country – totaled 48,000 in 1998, representing a meager 0.7% of the total.

1.2.3 Education

Basic education plays an important role in establishing the social and economic foundation of any country and needs to be upgraded all the time. In Venezuela, proliferation of compulsory education throughout the country is considered to be national priority. Last year, the government embarked on the Plan de Escuela Bolivariana to enhance basic education and promote integrated education. As part of such efforts, it is important to develop skills that are required to achieve the goal set in the economic development plan by establishing vocational training schools in rural areas to meet the needs by local industries

TABLE 1.2.4 UNIVERSITIES AND STUDENTS BY STATE

State	Land Area		Population		Education	
	(Km ²)	(person)	Person/Km ²	Nos. of School	University & College	Nos. of Registered Student
Amazonas	177,617	55,717	0.34	268	2	24,149
Anzoategui	43,300	1,034,312	25.37	953	5	256,931
Apure	76,500	285,412	3.70	709	4	95,034
Aragua	7,014	1,300,000	159.70	1,122	8	645,362
Barinas	35,200	456,246	15.48	920	2	136,748
Bolivar	238,000	1,142,210	4.10	1,156	5	271,164
Carabobo	4,850	2,106,265	417.00	995	4	344,929
Cojedes	14,800	182,066	12.30	418	4	53,021
Delta Amacuro	40,200	84,564	3.18	206	1	28,445
Distrito Federal	1,930	2,103,661	1,182.79	1,129	13	420,164
Falcon	24,800	599,185	29.40	1,082	5	172,959
Guarico	64,986	488,623	7.50	784	3	149,890
Lara	19,800	1,430,968	50.50	1,525	8	316,690
Merida	11,300	570,215	54.50	1,059	3	157,840
Miranda	7,950	1,871,093	235.40	1,393	7	418,472
Monagas	28,900	470,157	16.30	631	3	146,704
Nueva Esparta	1,150	263,748	229.30	252	2	74,775
Protuguesa	15,200	576,435	37.90	866	3	161,041
Sucre	11,800	679,595	57.60	886	2	193,623
Tachira	11,100	807,712	89.95	1,051	4	195,051
Trujillo	7,400	493,912	78.76	875	6	137,436
Yaracuy	7,100	466,132	70.14	566	1	112,543
Zulia	63,100	3,000,000	60.75	1,927	9	590,508
Total/Average	913997	20,468,228	123.56	20,773	104	5,103,479

Source: CAF April 2001. Arranged by JICA Study Team.

1.2.4 Income and wage

Income distribution is a crucial factor for affecting social and economic stability in any country. In the present economy that heavily depends on the oil sector, while the non-oil sector lacks growth potential and vitality, the income gap is widening and poor people have limited sources of income, largely relying on public investment and social welfare. The situation can only be improved by creating employment opportunities through balanced economic growth. In particular, local industries (the primary sector - agriculture, forestry, fishery, and mining – and industries processing farm products and other raw materials, and tourism) should be used as major vehicle to narrow the regional disparity in income. Promotion of local industries – which also means promotion of SMEs – will therefore become effective measures to improve income distribution both geographically and hierarchically.

According to IDB, the average real wage in the country dropped 68% between 1981 and 1998. Thus, the government has won the battle against inflation at the cost of widening income gap. In particular, wages in the informal sector are 45% lower than those in the formal sector. In 1998, 61% of total population (14.6 million) was below the poverty line and 31% (7.5 million) was classified as the lowest income class. On the other hand, the highest income class (5% of total population) is said to account for 50% of total income.

Wage levels in the country vary greatly between the oil and related industries earning large profits and other industries, especially small- and medium-sized manufacturing enterprises, e.g., the wage for a specific job in the oil industry is often a few times higher than that in other industries. Correction of the wage differential by raising the minimum wage level, however, does not work well in the stagnant economy with a high unemployment rate and creates heavy cost burdens on small enterprises, which may be discouraged from hiring new employees. On the other hand, the oil and other high-wage companies attract the bulk of college graduates, creating a significant gap in quality of human resources. Furthermore, secondary and post-secondary education opt to emphasize the subjects that meet the needs of such companies. To correct the situation, efforts should be made to foster non-oil industries that can generate high profits and afford to pay good wages. In particular, SME promotion aims to discover and foster companies with growth potential.

1.2.5 Regional economy

With the deterioration of the farm sector and the decline in population, most regional economies are losing vitality. The government, in its new economic development plan, sets priority to regional development and decentralization of economic activities. It has announced a national transportation network plan and series of regional development plans, such as the Orinoco/Apure Axis development plan. Based on these master plans, implementation plans will be about to be completed. As a result, SME promotion programs in various regions will be designed in line with the policy objectives set forth in the relevant development plans, which are summarized as follows:

- a. Decentralization of population and economic activities that are excessively concentrated in the north central region;
- b. Revitalization of local economies to attract industries and population; and
- c. Infrastructure development to support regional economic development, including the construction of transportation networks and the installation of communication systems.

In addition, other supportive programs, which should usually accompany regional development projects, should be implemented, including optimum allocation of management resources for regional economic development, proliferation of information media, induced development of local industries (especially agriculture, forestry and agro-industry), and the enhancement of the local government organization to support regional development initiatives.

It should be noted that many development plans have failed to show economic viability as they overemphasized infrastructure development, often setting an ideal, unrealistic goal. To avoid the unfavorable consequence, detailed research and study is required prior to the development of the above implementation plans for regional development. In particular, a target region or area should be thoroughly analyzed and evaluated to assess its development potential and verify economic viability of a particular plan or project. Relying on the unfounded axiom, such as “an industrial estate always contributes to regional development,” must be avoided. There are a number of unsuccessful and defunct development projects in many countries including Japan, from which we can learn an important lesson, “industrialization is by no means ubiquitous.” Regional development is not a synonymous to industrialization. It is important to select a right industry for each region or area by ascertaining its development potential accurately.

TABLE 1.2.5 TRENDS IN GROSS OUTPUT AND VALUE ADDED BY STATE

	Gross Production (Bs.1000)						Added Value (Bs.1000)					
	1992	1993	1994	1995	1996	1997	1992	1993	1994	1995	1996	1997
Amazonas	58,813	73,798	153,378	159,088	47,088	102,571	16,625	18,315	25,304	29,244	180,188	244,456
Anzoátegui	79,631,447	63,115,287	74,124,415	103,815,998	207,726	700,200,972	48,221,795	29,482,979	30,050,628	38,193,928	78,656,628	281,934,258
Apure	107,042	217,344	185,990	352,205	578,017	53,311,006	18,972	58,148	76,103	128,891	185,578	16,262,105
Aragua	195,456,615	254,892,700	322,814,732	457,511,155	73,922,435	511,254,369	77,873,355	106,465,986	108,844,590	162,866,970	313,222,302	92,971,616
Barmas	3,793,385	4,578,898	6,411,783	9,211,895	18,532,765	46,585,184	823,445	1,357,632	2,075,413	3,805,168	8,926,927	11,948,191
Bolívar	138,347,447	155,553,911	219,325,381	349,262,231	618,737,516	347,789,890	50,143,168	58,479,294	69,838,980	165,940,701	341,383,914	463,145,400
Carabobo	314,063,055	411,795,846	536,200,929	823,638,834	1,533,280,430	1,060,333,207	128,814,356	190,610,712	209,985,835	334,150,954	694,387,420	206,110,229
Cojedes	8,150,638	7,883,629	7,850,152	8,320,162	14,206,420	1,310,270,360	2,819,772	3,256,323	2,496,807	3,418,325	6,291,894	551,355,461
Delta Amacuro	28,614	96,551	79,116	61,566	101,914	221,780	8,117	20,823	18,294	13,346	54,858	74,424
Distrito Federal	102,625,610	125,861,079	146,513,355	214,685,939	324,758,752	224,586,459	41,003,615	53,119,809	52,932,817	82,927,634	124,349,451	36,909,790
Falcón	149,444,968	224,508,583	291,030,974	311,993,714	114,031,938	741,733,354	92,813,826	187,381,781	229,306,296	247,142,915	46,847,014	643,381,255
Guárico	6,161,779	9,048,195	11,406,626	20,002,584	52,023,243	4,798,148,538	1,534,161	2,712,981	2,464,292	7,513,700	21,477,714	1,882,081,121
Lara	56,407,315	84,997,850	103,673,747	155,088,899	241,347,587	569,872,075	22,596,838	36,657,066	38,965,405	64,253,249	92,249,810	1,266,928,103
Mérida	10,216,815	18,996,888	17,600,415	10,928,860	20,714,003	52,068,088	2,583,321	4,351,979	5,594,849	6,677,849	7,068,830	9,461,233
Miranda	210,279,242	280,965,537	391,162,832	509,187,406	784,742,528	542,685,177	95,881,379	133,593,774	148,292,726	227,506,121	359,665,573	106,757,082
Monagas	5,606,529	9,475,133	11,694,263	18,061,282	35,625,982	120,087,467	2,419,306	5,072,666	6,077,552	10,642,778	22,193,990	79,551,416
Nueva Esparta	1,212,456	1,825,743	2,625,317	4,552,181	7,259,776	24,471,132	511,852	842,419	842,197	1,627,409	4,001,431	14,342,599
Portuguesa	17,400,847	23,427,000	29,148,947	59,032,258	98,161,407	638,501,729	3,984,198	40,589,069	7,198,717	19,480,777	16,814,383	230,923,124
Sucre	23,797,184	31,694,606	44,415,909	54,831,364	70,718,271	238,375,971	10,029,466	118,524	18,925,957	18,887,574	14,350,158	51,436,239
Táchira	16,329,509	21,915,022	22,629,342	33,767,717	49,957,126	125,575,536	4,726,482	6,968,197	7,163,490	14,073,428	21,349,937	28,575,694
Trujillo	6,028,186	8,769,821	10,637,041	19,271,038	33,961,540	85,367,973	2,559,867	4,098,208	3,960,128	8,412,788	12,606,955	16,873,703
Yaracuy	14,594,537	18,568,745	28,408,093	32,419,852	72,872,461	474,006,983	5,782,081	8,061,943	11,136,292	10,077,276	22,573,210	310,012,932
Zulia	115,469,881	140,036,329	196,870,823	283,957,275	121,539	1,389,617,490	45,691,028	55,348,681	68,735,958	94,395,391	386,018,982	488,342,085

Source: INE

1.2.6 Environment

In Latin America, most governments started to emphasize environmental regulation relatively recently, after June 1992 when the United Nation's Environmental Summit was held in Rio de Janeiro, Brazil. However, Venezuela started committed efforts relatively early. The government enacted the Environment Law in June 1976 and decided to establish the Ministry of Environment and Natural Resources under the Central Administration Law that was enacted in December. The ministry was established in 1978.

(1) Geographical division for environmental regulation

For environmental regulation purposes, the country is classified into the following four regions:

- 1) Maracaibo lowland in the northwest
- 2) Andes mountain ranges extending from the southwest to the northeast
- 3) The central plain centering on the eastern watershed area along the Orinoco river
- 4) Guyana plateau in the southeast

(2) Legal framework for environmental regulation

The new constitution enacted in December 1999 contains an independent chapter on the environment, Chapter 9 "Environmental Right (Los Derechos Ambientales).

<Articles 127 and 129 of the new constitution>

- The state shall have the right and the obligation to protect and maintain the environment for each generation of population and people in future generations.
- All the people shall have the right to benefit from the environment that is safe, healthy and ecologically balanced.
- The state shall establish national development policy in consideration to the ecological system and conduct a preliminary study on every activity that may destruct such system in order to identify its environmental, social and cultural impacts.

<Related laws>

1) Environmental Law (Ley Orgánica del Ambiente, June 1976)

The law has the primary objective to establish the principle on environmental preservation, protection and improvement in the context of the national development

policy and designates the Ministry of Environment and Natural Resources as the leading agency. The provisions of Article 20 define activities subject to environmental regulation as the “act of contaminating or deteriorating, directly or indirectly, the atmosphere, water, sea bottom, soil or subsoil, or adversely affecting wild animals and plants.”

- 2) National Land Development Law (Ley Orgánica para la Ordenación del Territorio, August 1983)

The primary purpose of the law is to establish the national develop process within the framework of the long-term, national economic and social strategy.

- 3) Urban Development Law (Ley Orgánica de la Ordenación Urbanística, December 1987)

The law has the primary objective to promote urban development that aims for harmonious development.

- 4) Soil, Water and Foreign Law (Ley Forestal de Suelos y Aguas, January 1966)

The law regulates preservation, development and exploitation of natural resources and their products.

- 5) Wild Animal Protection Law (Ley de Protección a la Fama Silvestre, August 1970)

The law protects wild animals and products made therefrom and promotes their rational use.

- 6) Environmental Penal Code (Ley Penal del Ambiente, January 1992)

The law aims to reinforce the functioning of the Environmental Law by defining various acts of violating the law and imposing penalty on the violator, together with preventive measures, restoration and compensation methods.

(3) Organization of the Ministry of Environment and Natural Resources

The minister consists of 10 bureaus, namely Environmental Information, Environmental Planning and Improvement, Infrastructure, Environmental Education and Local Community Participation, Environmental Conditions, Orinoco-Apure Planning, Water and soil, Wildlife, and Forest Resources.

The minister implements the following action programs.

- 1) National environmental management program (Programa Nacional de Geerencia Ambiental)

A five-year program for modernization and technological upgrading, started in 1997

- 2) National Weather Forecast System Improvement Program (Programa de Mejoramiento del Sistema de Pronóstico Hzdrometeorológico Nacional, VENEHMET)

A five-year program to modernize 40% of weather stations in the country, with equipment upgrading (covering 55%)

(4) Environmental innovation and strategic goals

- 1) To promote the rational and effective use of natural resources for the purpose of attaining what is required for daily life, thereby to ensure sustainable growth of the nation.
- 2) To appropriately control and manage supply of drinking water, sewerage treatment, treatment of solid wastes, and air pollution, thereby to improve standards of living of population.
- 3) To accomplish the dual goals of ensuring stable supply of natural resources and available reserves, while implementing a national development strategy, thereby to reinforce national development.
- 4) To establish and apply the legislative and administrative frameworks for the establishment of environmental policy.
- 5) To promote participation of private enterprises in implementation of environmental measures at national, regional and local levels.
- 6) To encourage cultural innovation among people in order to develop the lifestyles and the value that harmonize with the environment.

While the legal framework for environmental protection measures is well established in the country, administrative measures against industrial pollution is far from satisfactory. While large enterprises, including basic industries, appear to realize the importance of environmental protection and the need for compliance with environmental regulation, smaller enterprises seldom comply with it and the government does not monitor or enforce compliance. Clearly, the establishment of environmental policy for SMEs will become an important element of SME promotion strategy. In particular, adequate guidance on pollution control should be incorporated into promotion policies and programs for SMEs in pollution generating industries, including electroplating, food processing, leather, textile and dyeing. In particular, pollution control measures should start from the planning stage.

1.2.7 Infrastructure development plans

(Ministry of Infrastructure: Roads, railroads, water and air transport)

(1) Transportation

1) Land transport

The following six projects are underway to develop highway networks.

- a. Rómulo Bentancourt
- b. José Antonio Paéz
- c. Pilares del Segundo Puente Orinoco
- d. Ampliación de la red Centro Occidental
- e. Antonio José de Sucre
- f. San Cristóbal – La Furia

Inter-modal linkage products are as follows:

- a. San Cristóbal – La Furia; road and railroad
- b. Ciudad Guayana – Orinoco Bridge No.2 – Punta de Ayala (deep port in Zukula)

Note: This area is under study as a candidate site for a deep sea port.

2) Water and air transport modernization projects

These projects are not formally approved but are considered as projects suitable for foreign financial assistance.

- a. Modernization of water channels (Modernización del Control del Espacio Acuático)
 - Lake Maracaibo and Apure river, to reduce navigation time
 - Amount of investment: 198MMUSD

(Breakdown)

Infrastructure 51%, rescue system 3%, communication stations (31 category A1 stations) and marine transport 46% (pilot); including training, documentation, spare parts, and maintenance as VTS, AIS and logistics support.

- b. Modernization of air space control

- All air space
- Amount of investment: 285MMUSD

(Breakdown)

Navigation control 74%, ATS control center, control systems and rescue systems 24%, and fire fighting systems 2%

3) National transportation strategy plan (Planificación Estrategia de Transporte)

- a. National transportation plan: To compile the study on the regional road system.

- b. National inter-port plan (connection between rail, airport and port)
Feasibility study is underway. At present, no legal framework is established for “inter-port.” as the terminal. The plan contemplates the establishment of the legal framework.
 - c. Feasibility study on east region highway
The project will be internationally financed and operated by the private sector.
- 4) Studies on connection with neighboring countries
The following studies are underway in relation to both road and railroad.
- a. Eastern region road/rail networks → Northern region of Brazil
Inland access to the MERCOSUR market
 - b. Western region road/rail networks → Northern region of Colombia
Inland access to the Andes common market (the inland route is currently available, but a new route will be constructed for efficient transport)

(2) Rail

Railroads in the country have total length of 542km, of which 363km are state-owned and single track, and 179km private-owned. The track gauge is 1,435mm. According to IAFE (National Railway Corporation)’s short-, medium- and long-term national railroad plans, rail networks with total length of 4,000km will be constructed over the next twenty years in relation to regional development projects, with the primary purpose of connecting the Orinoco/Apure hub project and the east/west hub project. Furthermore, the following specific goals are defined:

- To enhance a comprehensive transportation system and promote its diverse use;
- To ensure smooth movement of goods and people in the national development plan;
- To supplement road, coastal and river transport in order to expand the choice of intermodal transport;
- To ensure the function to support exports of non-traditional export items (mineral resources)
- To ensure stabilization of transportation costs and reduce burdens on road transport; and
- To stimulate trade with MERCOSUR and ANDES common markets via roads connected with Brazil and Colombia.

Figures 1.2.1 and 1.2.2 show national road networks and planned rail networks.

FIGURE 1.2.1 ROAD NETWORKS IN VENEZUELA (1/2)

1-2-14

VIALIDAD NACIONAL a Corto Plazo:

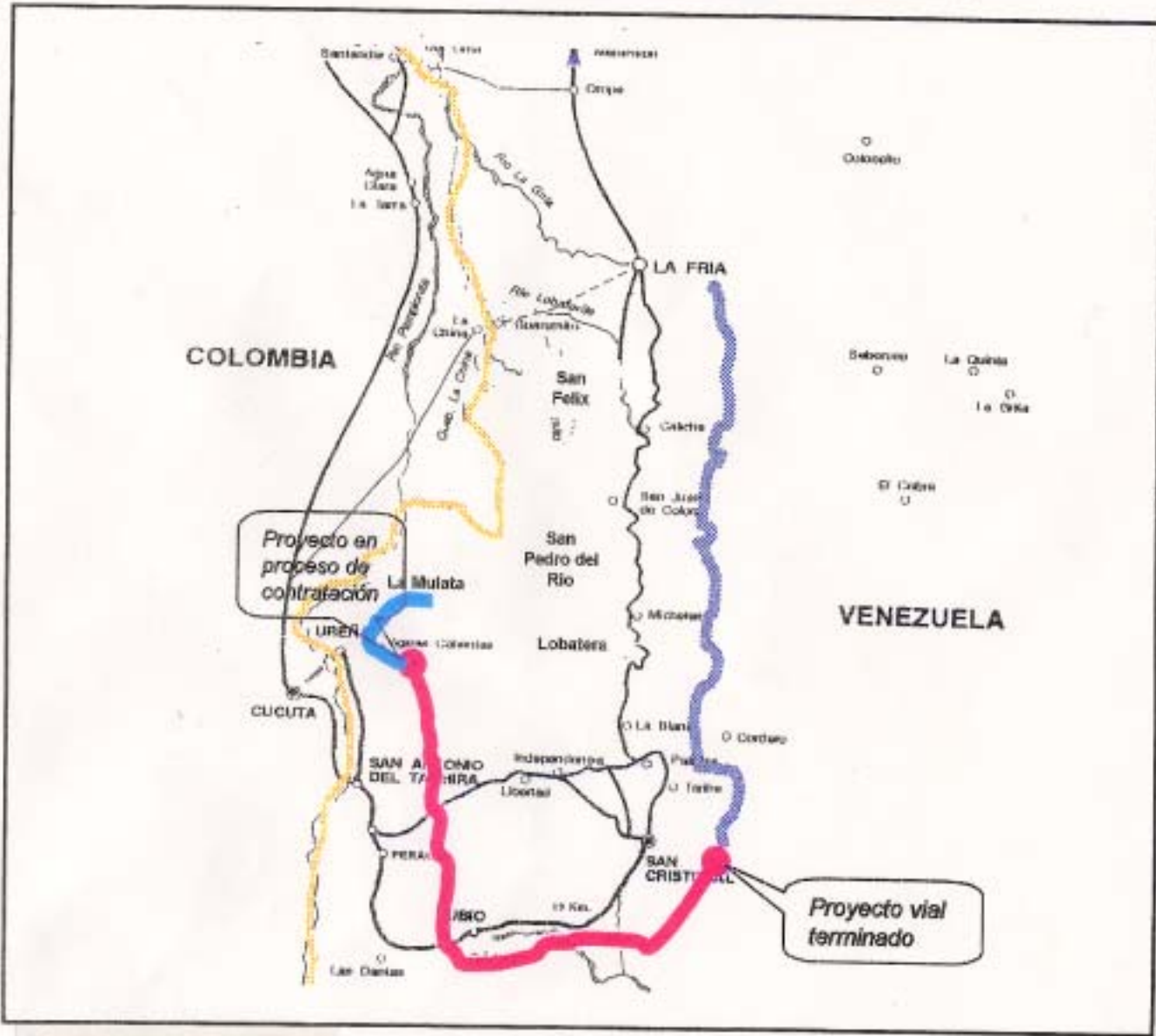
- Autopista Rómulo Betancourt
- Autopista José Antonio Páez
- Autopista Centro - Occidental
- Autopista Antonio J. de Sucre
- Tramo San Cristóbal – La Fría



Segundo Puente sobre el Orinoco



FIGURE 1.2.1 ROAD NETWORKS IN VENEZUELA (2/2)



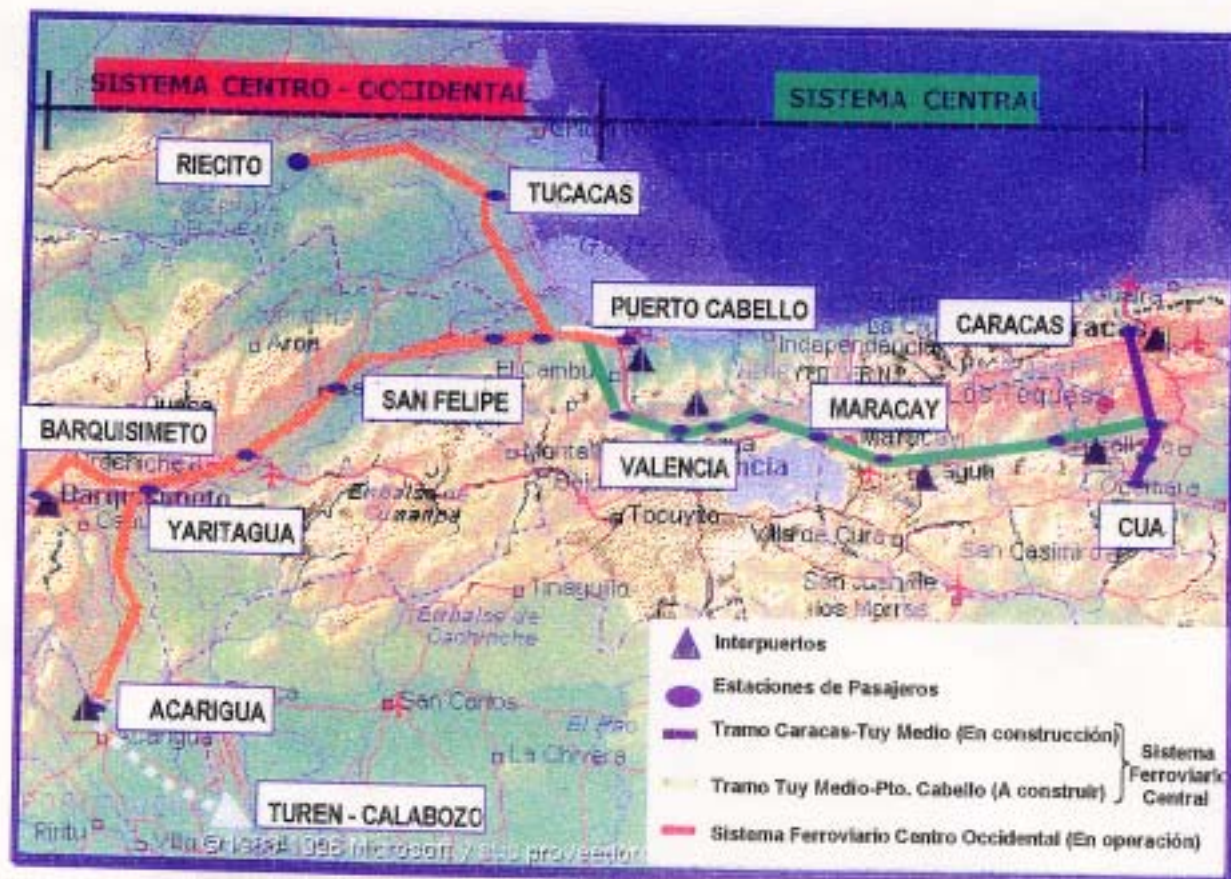
Source: Ministry of Infrastructure

FIGURE 1.2.2 RAIL NETWORK CONSTRUCTION PLAN IN VENEZUELA (1/2)

Sistema Oriental



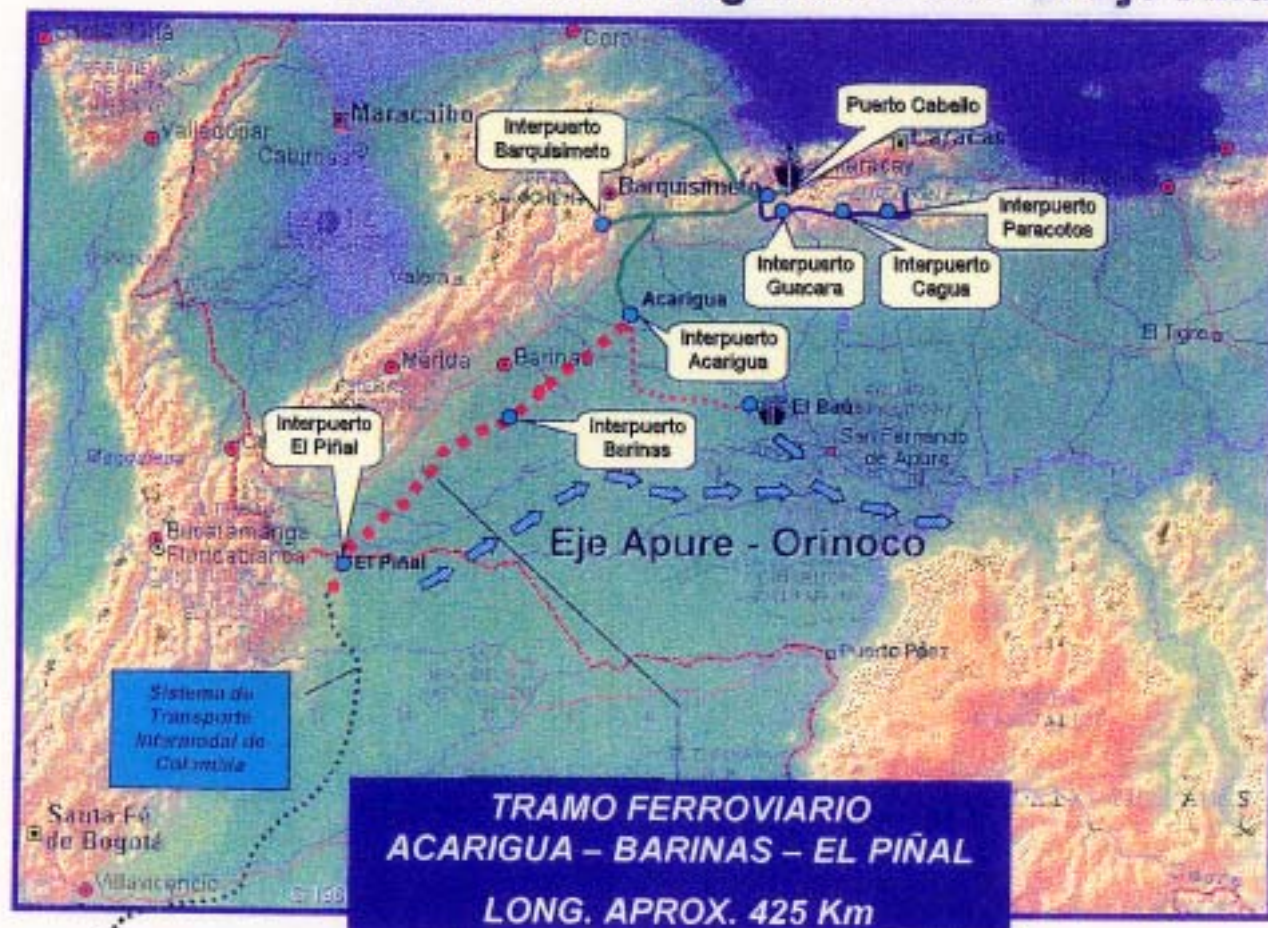
Sistema Central y Centro-Occidental



Source: Ministry of Infrastructure

FIGURE 1.2.2 RAIL NETWORK CONSTRUCTION PLAN IN VENEZUELA (2/2)

Sistema de Integración con el Eje Andino



Source: Ministry of Infrastructure

(3) River transport

Major rivers in Venezuela are Orinoco and its branch rivers, which basin area covers approximately 80% of national land, as shown in Figure 1.2.3. Orinoco extends 2,060km in length, is joined by four branch rivers (Ventuari, Caura, Carouni and Aro) on the right hand side, and by Guaviare, Meta, Arauca, Apure, Vichada, Portuguesa, and Guarico on the left side.

There are two navigation channels for ships to enter Orinoco from the Atlantic, north and south of the Orinoco delta. The north channel limits access to smaller ships with shallow draft. The south channel allows navigation of large cargo ships from Boca Grande, the mouth of the bay, to Puerto Ordaz (343km upstream) and an iron ore shipping port in Matanzas (18km further upstream). The channel is dredged to specific depth regularly, reportedly 9.7m in the dry season and 13.4m in the rainy season. Major features of Orinoco according to publication of the Institute Nacional de Canalizaciones are shown in Table 1.2.6.

TABLE 1.2.6 ORINOCO AND CHANNEL FEATURES

Distance	Matanzas - Boca Grande 361km dredged regularly	El Jobal - Matanzas 645km
Width	91.8 to 183m	100m
Water depth	Minimum 9.7m, maximum 13.4m	Minimum 2.5m
Capacity	80000MT (Barcos)	3500MT (Lanchas)

Source: JICA

Goods carried by water vessels via Orinoco are iron ores, bauxite, heavy oil and general cargos. According to a report of the Institute Nacional de Canalizaciones, iron ores account for 67%, general cargos 26%, heavy oil 5.1%, and bauxite 1.9%.

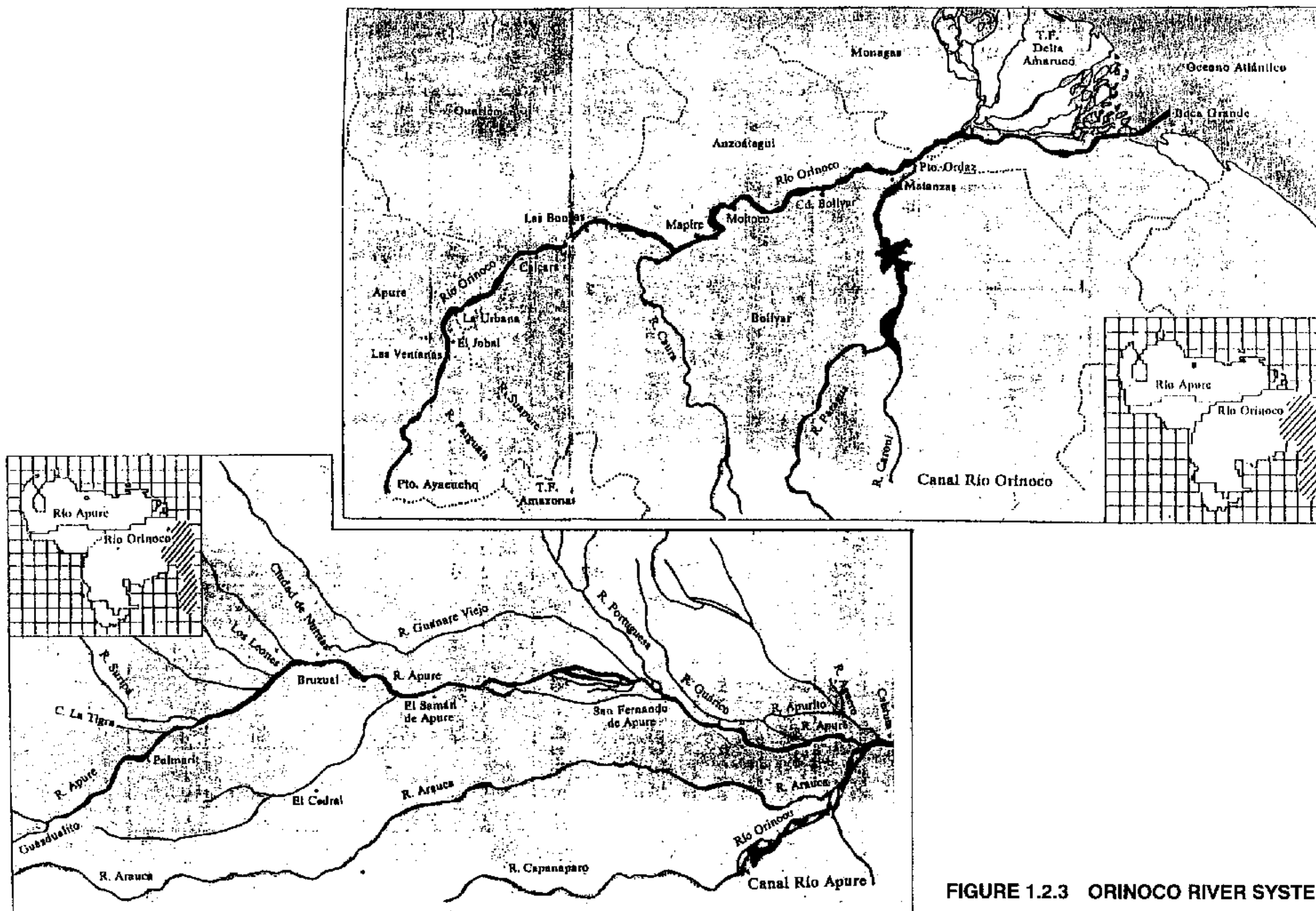


FIGURE 1.2.3 ORINOCO RIVER SYSTEM

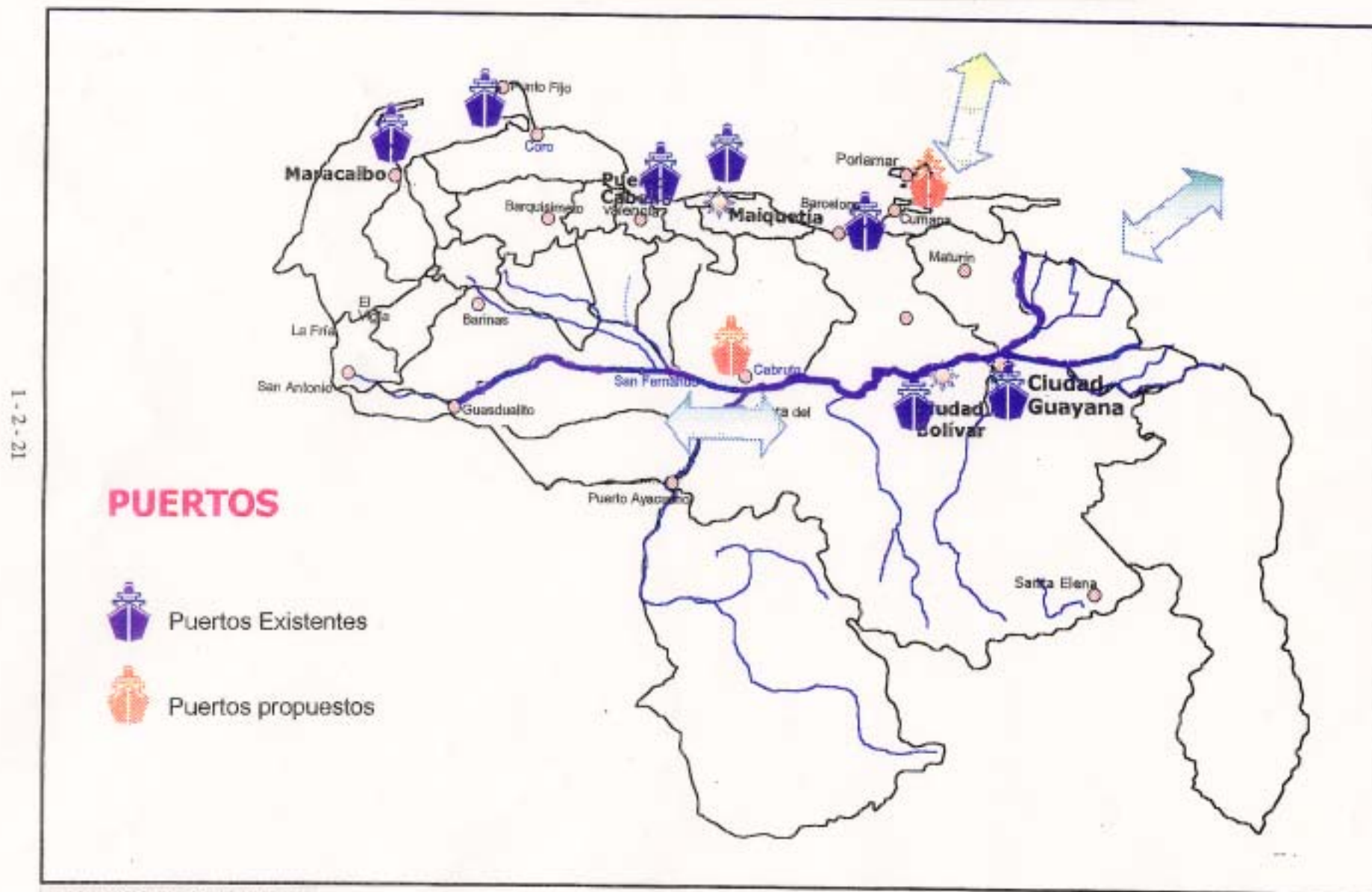
Source: Instituto Nacional de Canalizaciones (INC)

(4) Ports and harbors

In the country, there are eight seaports in the northern part, facing the Caribbean sea, as well as a river port accessible to oceangoing ships in Puerto Ordaz, a center of aluminum and steel industries in Bolivar and located in the lower part of Orinoco. Originally, ports and harbors have been exclusively managed by a state organization, INP, and were transferred to local governments in 1993 under the port decentralization policy. Now, the local governments are actively using the private sector for operation and management of the ports they are responsible for, which are competing with each other in providing service according to their advantages.

Particularly noteworthy is Puerto Cabello Port, which was significantly upgraded by IPAPC (Instituto Puerto Autonomo de Puerto Cabello) for the improvement of productivity, efficiency and safety. IPAPC commissioned cargo handling, storage and related services to private stevedore and terminal management companies on a concession basis. Together with its geographical advantage in being adjacent to an industrial zone, it has grown to a major port to handle more than 70% of marine cargos in and out of the country.

FIGURE 1.2.4 MAJOR PORTS AND HARBORS IN VENEZUELA (1/3)



Source: Ministry of Infrastructure

FIGURE 1.2.4 MAJOR PORTS AND HARBORS IN VENEZUELA (2/3)

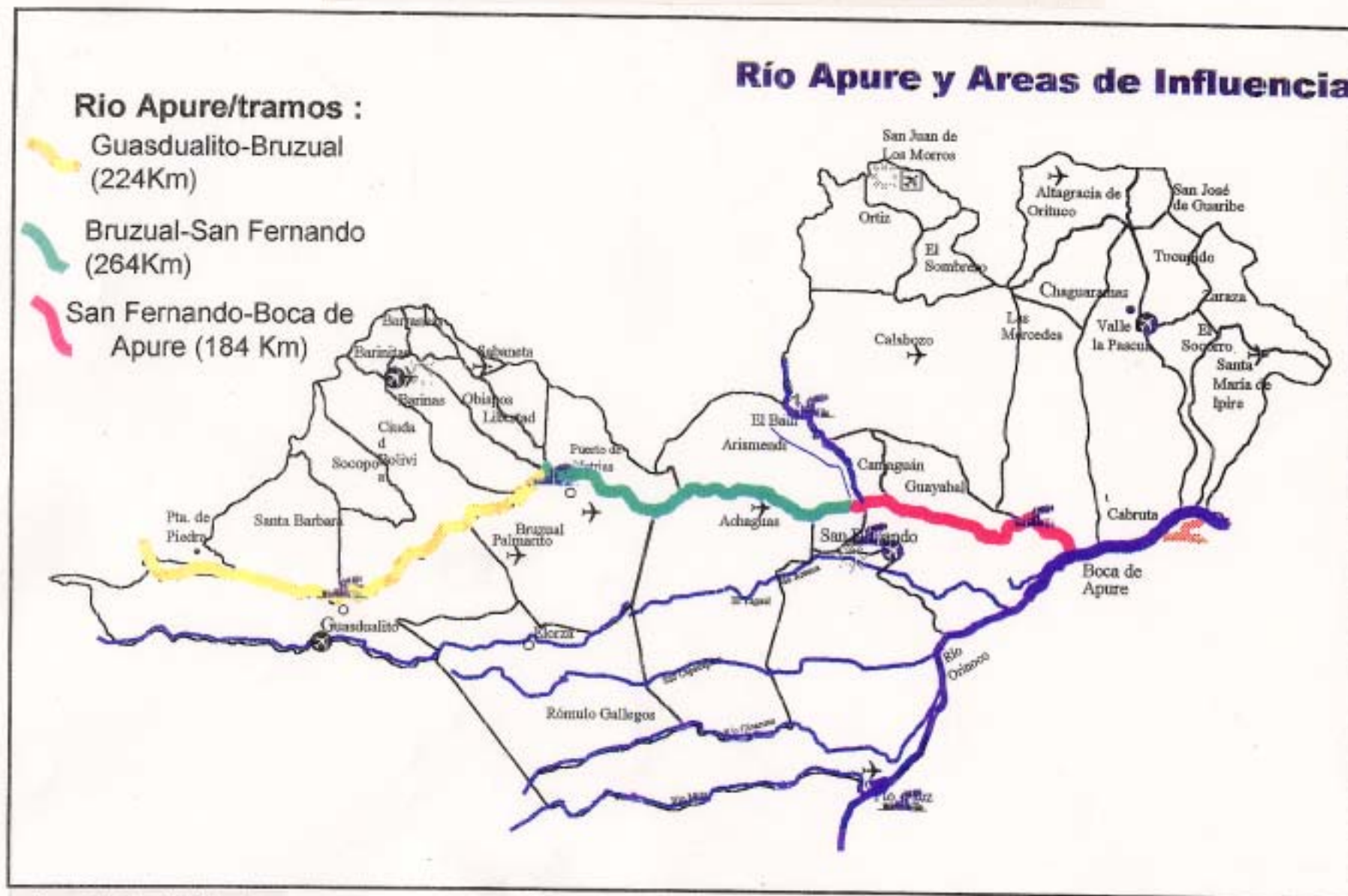


FIGURE 1.2.4 MAJOR PORTS AND HARBORS IN VENEZUELA (3/3)

1 - 2 - 23

Río Portuguesa



Rio Portuguesa/Apure:

Río Portuguesa

Boca de Apure-San Fernando (184 Km)

Río Orinoco



Table 1.2.7 shows the yearly changes in cargo tonnage handled by the four major ports in the country between 1990 and 1999, clearly indicating that Puerto Cabello has grown significantly over the past decade.

TABLE 1.2.7 CARGO TONNAGES HANDLED BY MAJOR PORTS IN VENEZUELA BETWEEN 1990 AND 1999

(MT/Y)

Year	Guanta	Maracaibo	La Guaira	Puerto Cabello
1990	446000	639000	1640000	3641060
1991	838000	841000	1938000	4378858
1992	794000	848000	2169000	4981378
1993	899000	864000	1943000	4827709
1994	599037	890000	1084000	5161483
1995	698174	964260	1685887	6646686
1996	761750	1109765	1645439	6849607
1997	965540	1240066	1785923	8870257
1998	nd	1187743	2129421	9524203
1999	nd	1068126	1774940	8596104

Source: IPAPC's annual report

Also, the three major ports (excepting Guanta) are compared on the basis of containerized cargo tonnage and the number of vessels entered, as shown in Table 1.2.8.

TABLE 1.2.8

(a)
Containerized Cargo Tonnage Handled by Major Ports
(1991 - 1999) (TEU/Y)

Year	Maracaibo	La Guaira	Puerto Cabello
1991			93696
1992			125728
1993			125678
1994			161140
1995	18883		214922
1996	23924	160472	245234
1997	31840	224439	385107
1998	30400	303603	486774
1999	20910	224439	496315

Source: IPAPC's annual report

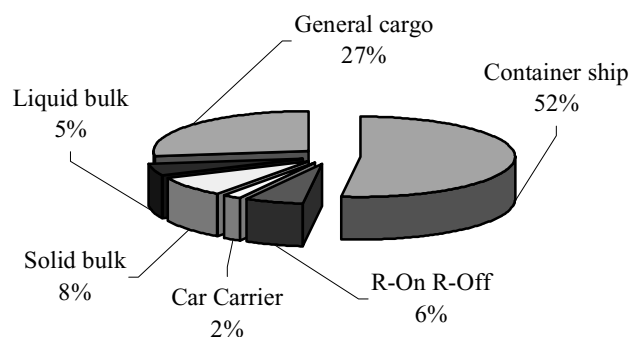
(b)
Ships Entered and Cleared at Major Ports in Venezuela
(1991 - 1999) (Vessels/Year)

Year	Maracaibo	La Guaira	Puerto Cabello
1991			1642
1992			2083
1993			2090
1994			1888
1995	526	1371	2095
1996	624	1310	2082
1997	752	1495	2593
1998	771	1747	2948
1999	645	1300	2541

Source: IPAPC's annual report

Of all vessels entered and cleared at Puerto Cabello, more than 50% are container ships, followed by general cargo ships and bulk carriers (Figure 1.2.5)

FIGURE 1.2.5 COMPOSITION OF SHIPS ENTERED AND CLEARED AT PUERTO CABELLO IN 1999



Source: IPAPC's annual report

Puerto Cabello ranks high among major ports in Latin America and the Caribbean area, in terms of containerized cargo tonnage handled per year (TEU/Y).

TABLE 1.2.9 CONTAINERIZED CARGO TONNAGE HANDLED BY MAJOR PORTS IN LATIN AMERICA AND THE CARIBBEAN AREA

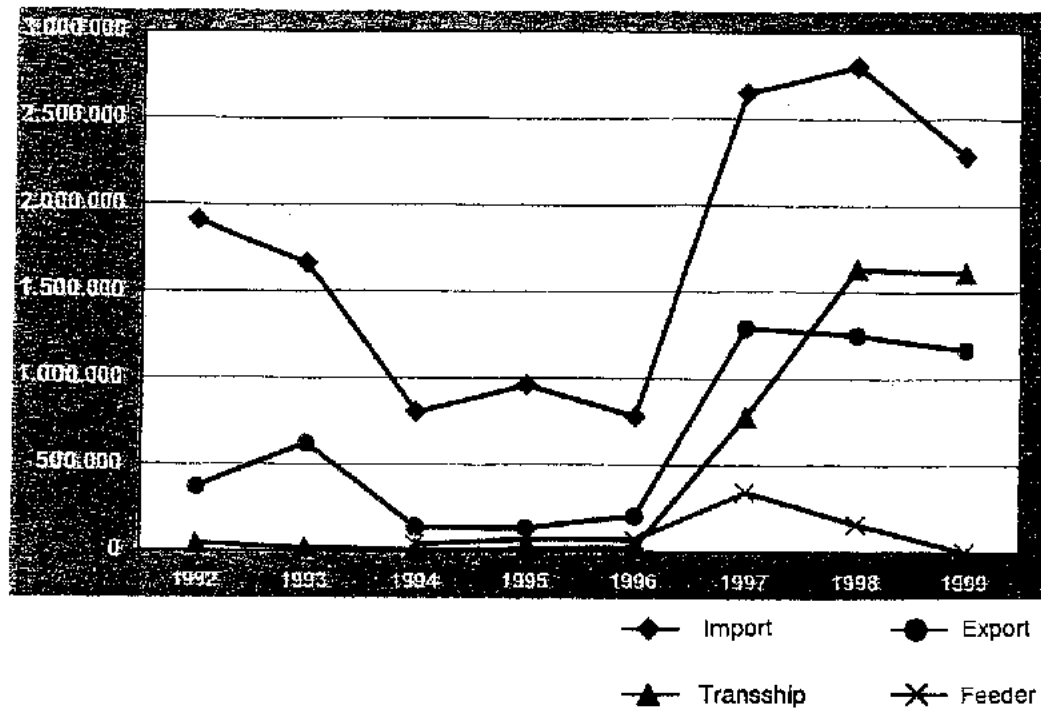
(TEU/Y)

Port	Country	1997	1998	1999
Buenos Aires (Incluye Exolgan)	Argentina	1023958	1139730	1076102
Colón (MIT, Evergreen, Panama Port)	Panama	748767	1117035	
Santos	Brasil	829486	799476	774044
Kingston	Jamaica	654523	670858	
Puerto Cabello	Venezuela	385107	486774	496315
Puerto Limón/Moin	Costa Rica	431152	454584	590259
Veracruz	Mexico	364000	427000	
San Anrtonio	Chile	373236	415001	374945
Guayaquil	Ecuador	375878	407434	
Callao	Peru	321567	378013	
Puerto Cortez	Honduras	309114	369235	273336
La Guaira	Venezuela	224439	302333	
Cartagena	Colombia	231549	277686	281568
Manzanillo	Mexico	256425	276542	
Buenaventura	Colombia	209519	275765	250299
Valparaíso	Chile	271739	255687	
Montevideo	Uruguay	201764	265892	250227
Port of Spain	Trinidad & Tobago	208666	231213	
Río Grande	Brasil	194963	224577	
Río de Janeiro	Brasil	202763	198197	
Paranaguá	Brasil	139141	161569	

Source: CEPAL

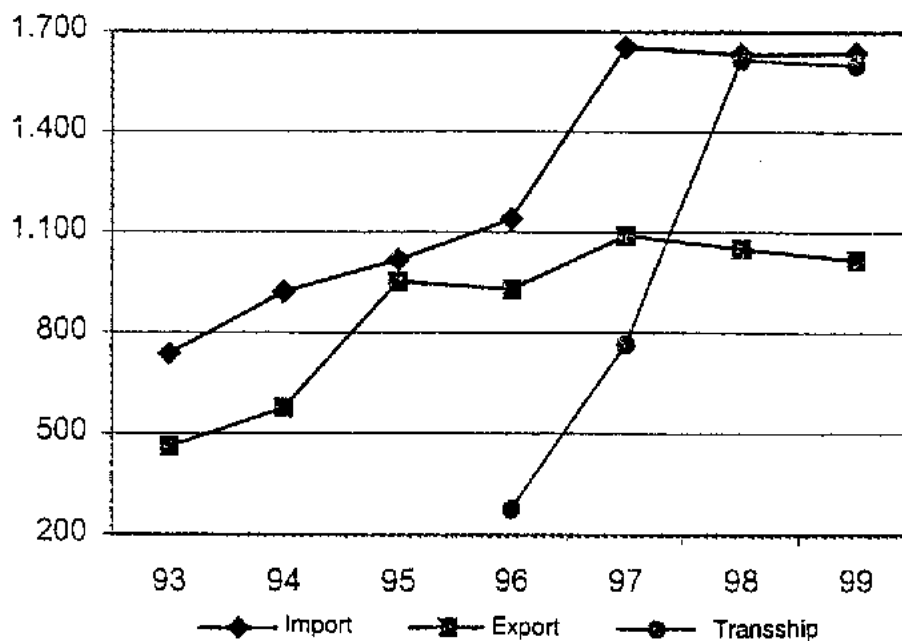
Another characteristics of the port in terms of cargo handling pattern include the rapid growth of transshipped and costal cargos within the general cargo category after 1996, probably due to the increase in small-lot transport to neighboring markets. Similarly, transshipped cargos in the container category increased rapidly after 1996, suggesting that the port is gaining confidence in its cargo handling service and establishes itself as a hub port in the country.

FIGURE 1.2.6 COMPOSITION OF GENERAL CARGO HANDLED BY PUERTO CABELLO



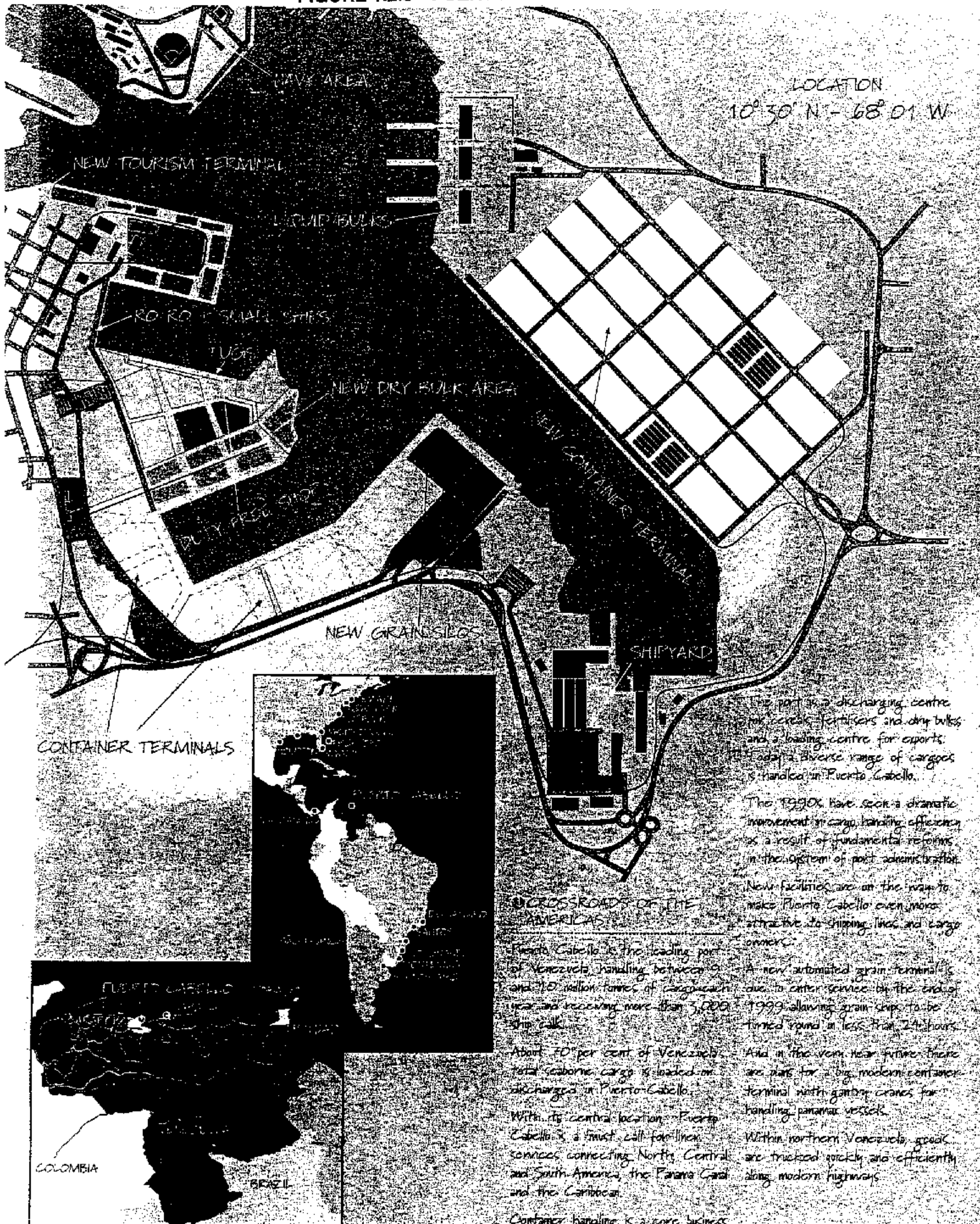
Source: IPAPC's annual report

FIGURE 1.2.7 COMPOSITION OF CONTAINERIZED CARGO HANDLED BY PUERTO CABELLO



Source: IPAPC's annual report

FIGURE 1.2.8 PUERTO CABELLO PORT LOCATION



The port is a discharging centre for cereals, fertilisers and dry bulks and a loading centre for exports. Today a diverse range of cargoes is handled in Puerto Cabello.

The 1990s have seen a dramatic improvement in cargo handling efficiency as a result of fundamental reforms in the system of port administration.

New facilities are on the way to make Puerto Cabello even more attractive to shipping lines and cargo owners.

A new automated grain terminal is due to enter service by the end of 1999, allowing grain ships to be turned round in less than 24 hours.

And in the very near future there are plans for a big modern container terminal with gantry cranes for handling panamax vessels.

Within northern Venezuela, goods are trucked quickly and efficiently along modern highways.

CROSSROADS OF THE AMERICAS

Puerto Cabello is the leading port of Venezuela, handling between 5 and 10 million tonnes of cargo each year and receiving more than 3,000 ship calls.

About 70 per cent of Venezuela's total seaborne cargo is loaded on or discharged in Puerto Cabello.

With its central location, Puerto Cabello is a first call for liner services connecting North, Central and South America, the Panama Canal and the Caribbean.

Container handling is a core business for Puerto Cabello, while transhipment of containers for regional destinations is a fast growing activity.

Source: IPAPC

1.2.8 Utilities and composition by energy sources

(1) Energy situation in the country

Present reserves of energy resources in the country and energy balance (supply and demand situation) are shown in Figure 1.2.10 and are summarized as follows.

1) Reserves (10^9 BBLS – oil equivalent)

The country has proven oil reserves of 76.9×10^9 barrels, 32.9% of which is very heavy crude found in the Orinoco river basin. The heavy crude can be commercially refined to synthetic crude, but the development cost must be competitive in comparison with the international crude oil price. Natural gas reserves total 25.1×10^9 barrels, 91% of which is currently produced as associated gas. Coal reserves, equivalent to 6.6×10^9 barrels, are largely found (92% of total) in Guasare, the western part of the country. Hydropower is equivalent to 8.4×10^9 barrels, 90% of which is located in Caroni, the eastern part.

2) Energy market

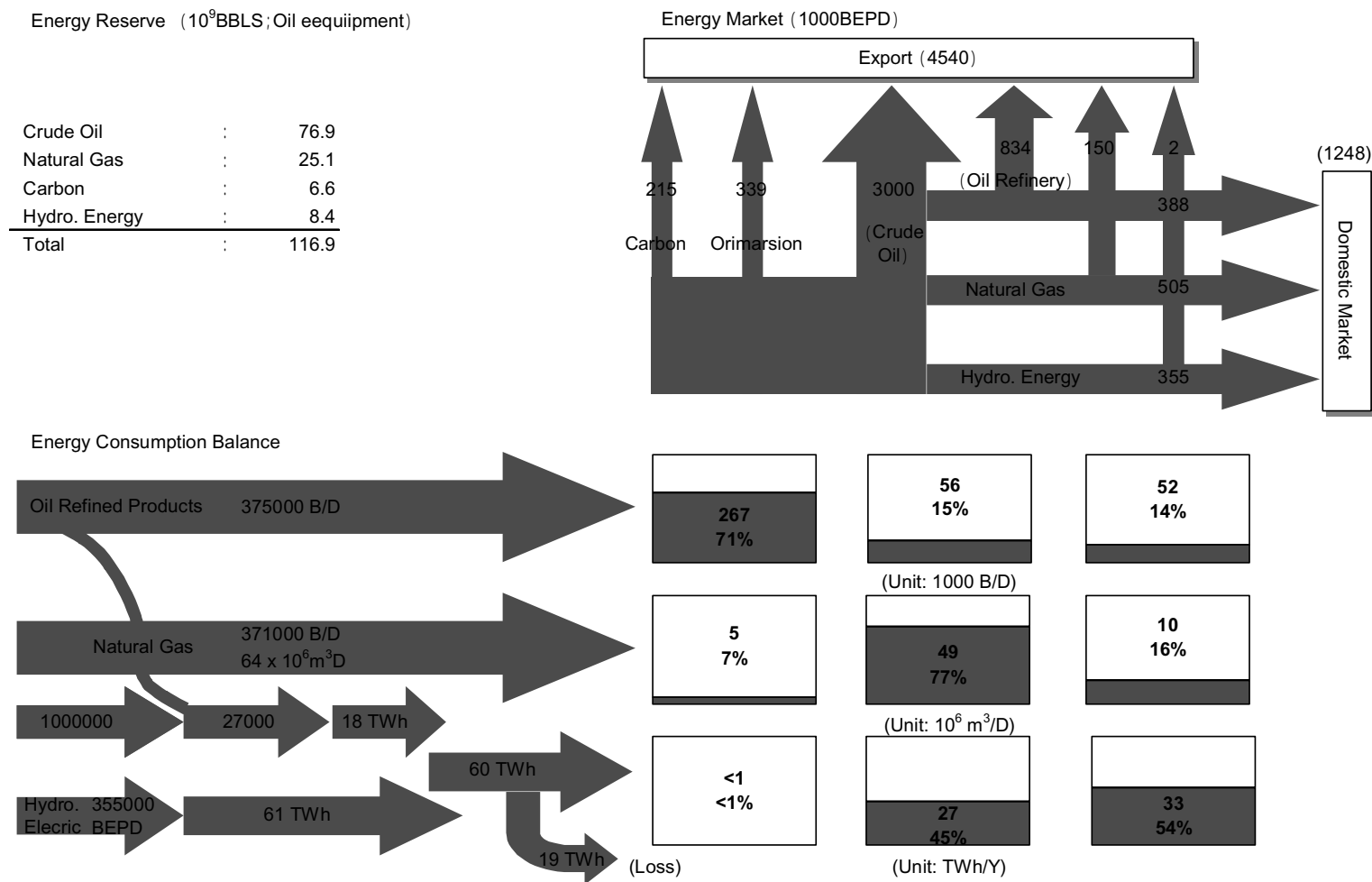
The total market size is equivalent to 5,788,000 barrels per day, 78% of which is supplied to the export market, which is composed of crude oil 66%, petroleum products 18%, oil emulsion 7.5%, coal 4.7%, gas 3.3%, and hydropower 0.04%. The remaining 22% goes to the domestic market, consisting of crude and petroleum products 31%, gas 40% and hydropower 29%.

3) Energy consumption balance

When the energy market is divided into transportation, industry and consumer, the transportation sector consumes 71% of petroleum products, the industrial sector 15% and the consumer sector 14%; 7%, 77% and 16% for natural gas, respectively; and less than 1%, 45%, and 54% for hydropower/thermal power (electricity).

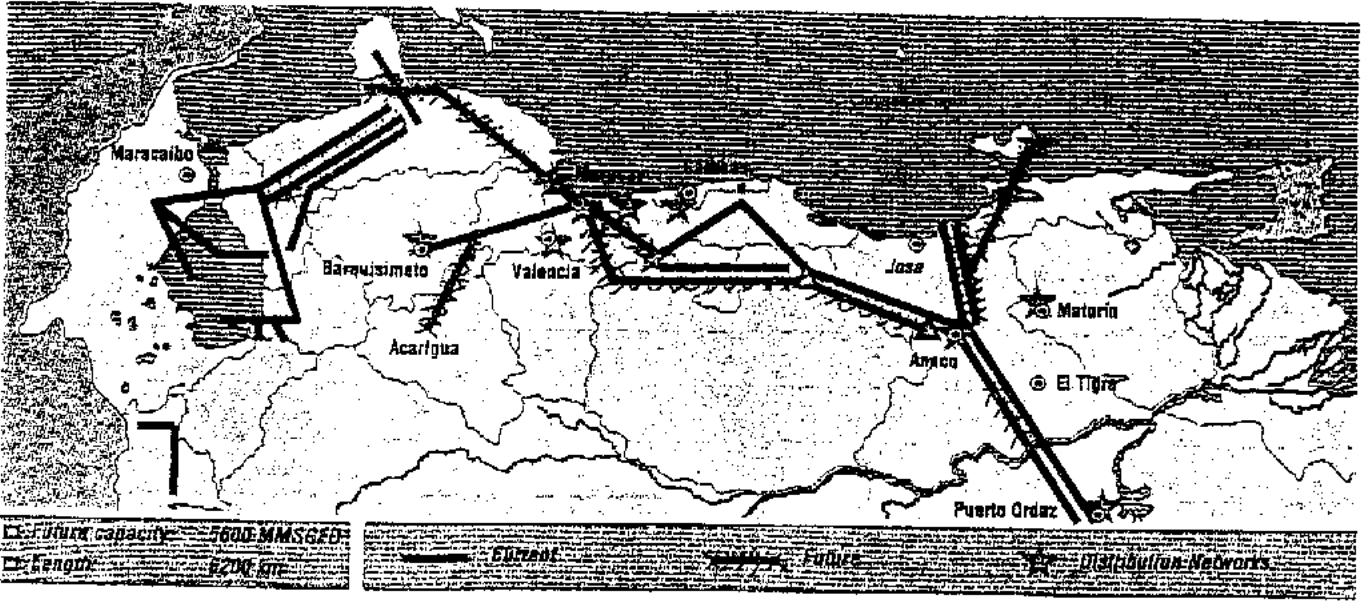
4) Figure 1.2.10 shows gas pipelines in the country. Note that east and west pipeline networks are not interconnected. Figure 1.2.11 shows methane gas pipelines for methanol plants and LNG export facilities (using offshore natural gas to be developed in the future).

FIGURE 1.2.9 ENERGY RESOURCE RESERVES AND ENERGY BALANCE IN VENEZUELA



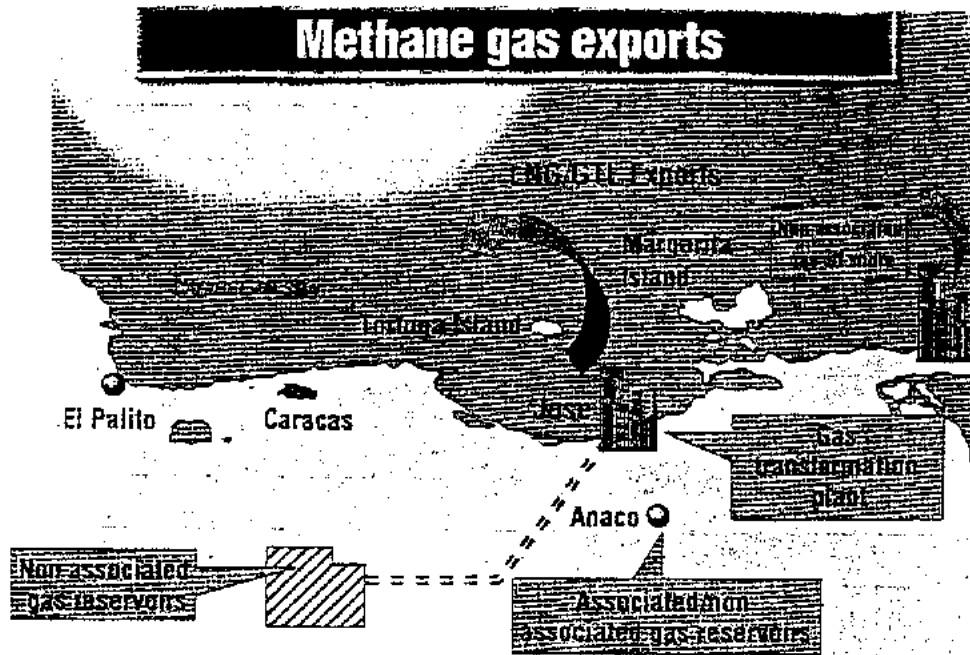
Source : MEM

FIGURE 1.2.10 EXPANSION OF EXISTING TRANSMISSION SYSTEM

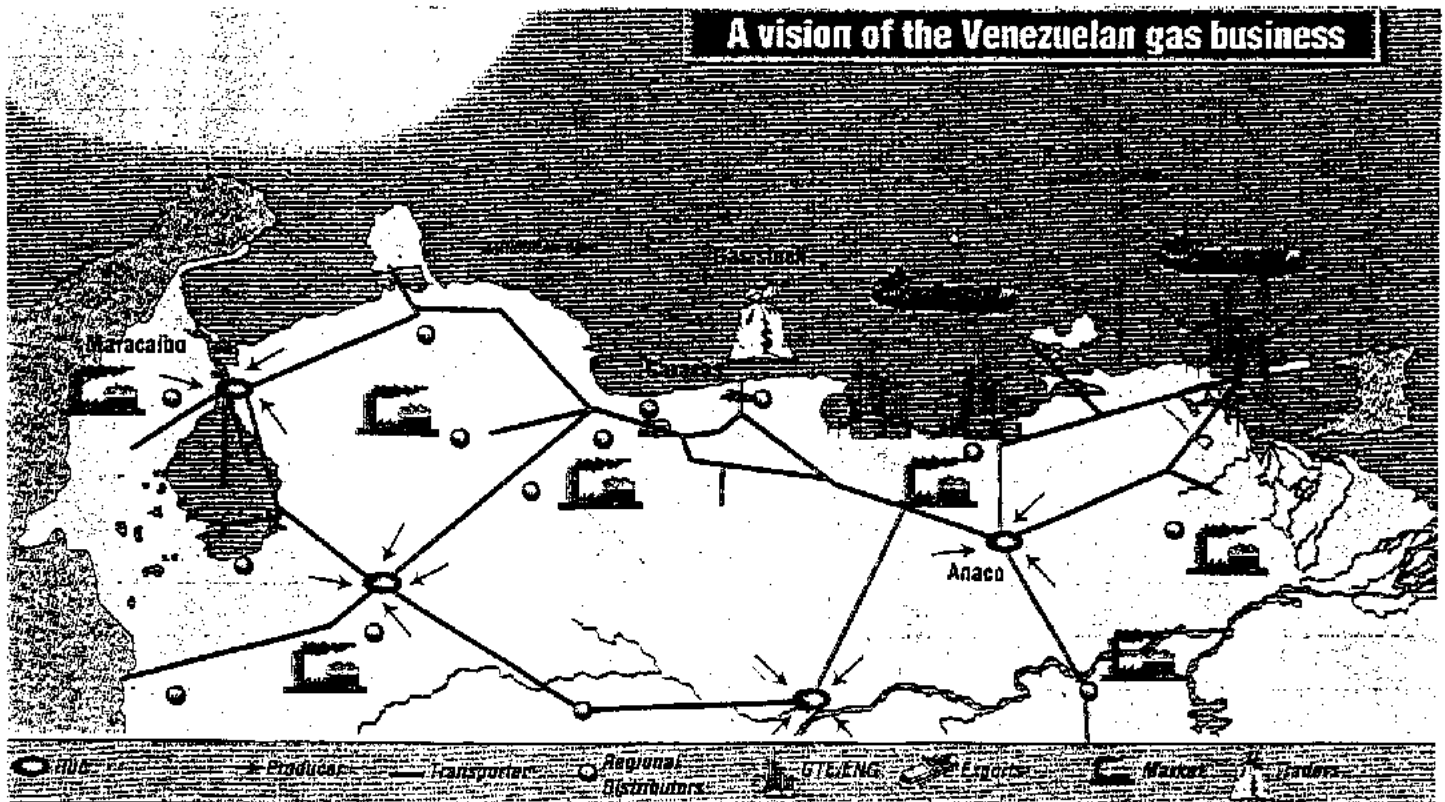


Source : PDVSA

FIGURE 1.2.11 GAS BUSINESS ACTIVITIES IN VENEZUELA



Source : PDVSA



Source : PDVSA

5) Electricity

The electricity supply system in the country consists of four state enterprises and six private companies (three are specialized in power distribution). Their installed capacities are summarized in Table 1.2.10. By type of energy source, thermal power (steam and gas) accounts for 6,990MW and hydropower 12,561MW.

TABLE 1.2.10 POWER GENERATION

Type of energy source (MW)	State enterprises				Private companies			Total
	Edelca	Cadafe	Enelven	Enelbar	Elecar	Eleva	Seneca	
Steam	-	2000	551	-	1895	-	-	4446
Gas	40	943	660	151	364	199	187	2544
Hydro	11941	620	-	-	-	-	-	12561
Total	11981	3563	1211	151	2259	199	187	19551

Source: MEM

Service areas of the power companies are shown in Figure 1.2.12. Three state enterprises (EDELCA, CADAPE and ENELVEN) and a private company (ELECRA) serve the entire country. Their generation facilities and transmission lines are summarized in Table 1.2.6.

TABLE 1.2.11 TRANSMISSION NETWORK

Company	Capacidad (GW)	Generación (TWh)	Líneas de Transmisión (km)		
			765KV	400KV	230KV
EDELCA	9.9	49.5	2126	1609	225
CADAPE	4.3	8.1	-	1303	3810
ENELVEN	1.3	4	-	-	264
ELECRA	2.2	7.6	-	-	258
TOTAL	17.7 ^{*1}	69.3 ^{*2}	2126	2912	4557

Source: MEM

Note) 1* - 93% of the entire country; 2* - 90%

Transmission lines are already extended to Colombia and will be extended to Brazil in the near future.

Steel and aluminum industries in Guyana receive electricity supply from EDELCA's Macagua hydropower plant, as shown in Figure 1.2.14.

Mapa de la Zona Metropolitana de Caracas

Legend:

- Generation
- Transmission
- Distribution

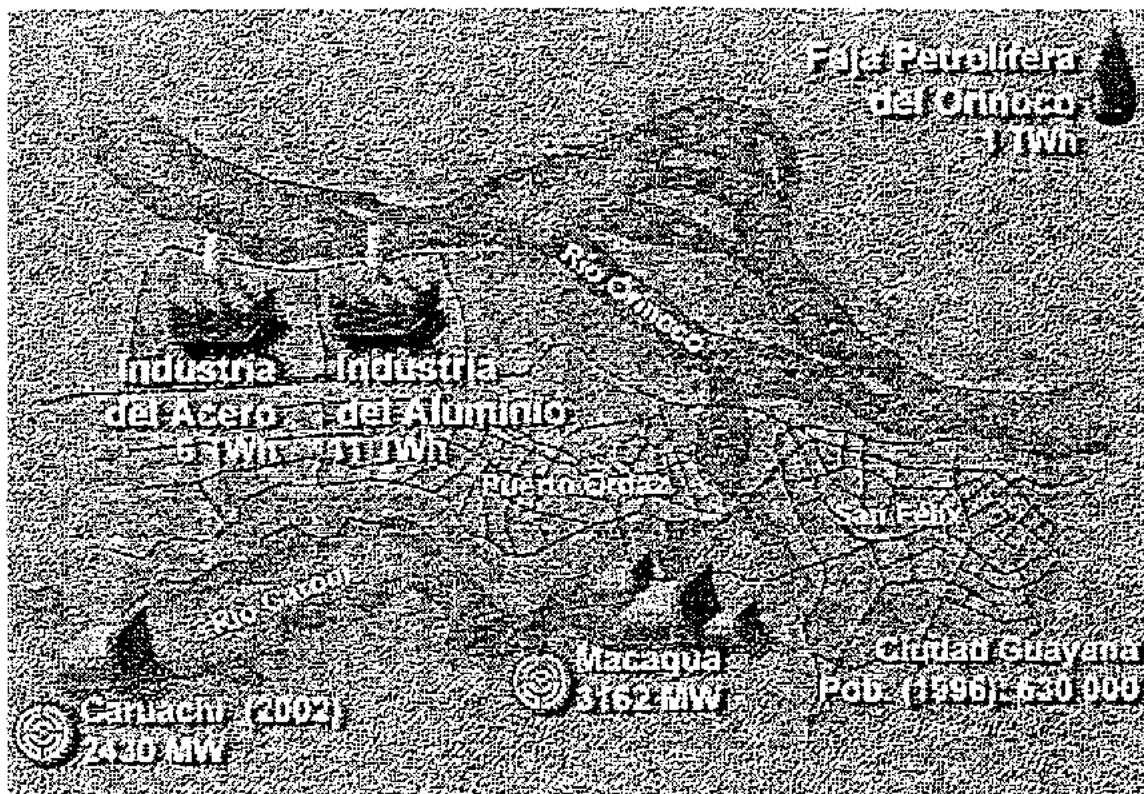
Regions and Utilities:

- Maracaybo (MAREC)
- San Felipe (SOFEL)
- Pto. Cabello (P.C.)
- Valencia (VAL)
- Caracas (CAR)
- Nueva Esparta (SENECA)
- FALC

Other labels on the map include: Barquisimeto, Valencia, Caracas, Nueva Esparta, FALC, and various power company logos.

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FIGURE 1.2.14 ELECTRICITY SUPPLY TO THE GUYANA AREA



Source : MEM